Canada

THE UNIVERSITY OF ALBERTA

AN INVESTIGATION OF THE UTILIZATION OF TIME BY SELECTED TEACHERS DURING LANGUAGE ARTS CLASSES

by

NELSON SCOTT.

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE
STUDIES AND RESEARCH IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF ELEMENTARY EDUCATION

EDMONTON, ALBERTA

FALL 1981

THE UNIVERSITY OF ALBERTA

RELEASE FORM

Name of Author: Nelson Scott

Title of Thesis: An Investigation of the Utilization of Time by Selected Teachers During Language Arts Classes

Degree for Which Thesis was Presented: Master of Education

Year This Degree Was Granted: Fall 1985

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis or to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(SIGNED) Nelson Scott

PERMANENT ADDRESS

148 Beaverridge Close

Fort McMurray, Alberta

DATE Aug 7, 1985

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "An Investigation of the Utilization of Time by Selected Teachers During Language Arts Classes" submitted by Nelson McGregor Scott in partial fulfilment of the requirements for the degree of Master of Education.

David Dillon
Supervisor

Joyce Edwards

John E. Oster

Date Oct 31, 1984

ABSTRACT

Several researchers have examined how teachers utilize time scheduled for teaching reading. This study extends this examination to time scheduled for teaching all strands of the Alberta language arts curriculum.

The research consisted of visits to the classrooms of five elementary teachers identified by their principals as good language arts teachers. Each classroom was visited for three days with teacher behavior recorded and categorized at thirty second intervals.

The study found that very little - occasionally no time at all - was utilized for direct instruction. A great deal of time was spent on time related to assignments. Workbooks and worksheets were used constantly. Nearly forty per cent of the time was consumed by three behaviors, Non-instructional, General Supervision and Transitional.

Nearly all the time was spent on reading and writing, with the other language arts strands - listening, speaking and viewing - being virtually ignored.

The results suggest that these and many ways in which teachers can be assisted to use time scheduled for teaching language arts more effectively.

ACKNOWLEDGEMENTS

This thesis is dedicated to my family: to Pamela who often wondered when her "'tend daddy" would come home from the "'versity;" to Graham who was 18 months old before he knew his father went to work; and to June for her support, understanding and patience.

I would like to thank Fort McMurray School District No. 2833 which provided me with the opportunity to further my studies, and its superintendents Jack E. Langford and Robert Prather for their interest.

I would also like to thank the five teachers whose classrooms I visited during my research for their cooperation.

Finally, I would thank David Dillon for his encouragement, criticism and ability to be flexible.

TABLE OF CONTENTS

	Page
List of Tables	
List of Diagrams and Charts	
Chapter I: An Introduction	1
Background	1
The Study	6
The Findings	7
Plan of the Thesis	8
Chapter II: A Review of Literature	9
A Debate: What Difference Does the Teacher Make?	10
The Teacher Does Make a Difference	13
Effective Schools: Teachers Do Make a Difference	14
Time in Schools	15
Sources of Learning Time	16
The School Year	17
Time Allocations to Subjects	19
Some Thoughts on the Use of Time	25
Models for Teaching	29
Needed: In Class Observation	31
The Durkin Study	33
Other Research on the Use of Classroom Time	39
Conclusion	43
Chapter III: The Research Design	45
Introduction	45
The Research Question	45
Teaching Defined	46
Matrix of Teacher Behavior in Language Arts	46
Additional Categories of Teacher Behavior	52
Pilot Study	54
The Teachers	55
The Visits	57
Data Collection	58
Summary	60

	Page
Chapter IV: The Findings	63
Report of Findings	64
Three Most Frequently Observed Behaviors	64
Three Types of Non-Instructional Behavior: Integral, External and Internal	66
Adherence to Scheduled Time	68
General Supervision and Transitional	69
The Next Nine	71
The Five Language Arts	79
Reading	82
Writing	85
Speaking, Listening, and Viewing	90
Teacher Behavior	91
Summary	94
Chapter V: Discussion	95
Predictable Outcomes	96
Some Thoughts About the Results	98
Implications for Practice	100
Suggestions for Future Research	103
Bibliography	105
Appendix I	109
Appendix II	111

LIST OF TABLES

		Page
Table 1	Categories for the Reading Period with Largest Percentages of Time Allocated to Them	5
Table 2	Summary of Scheduled Instruction Times for Prescribed Elementary Subjects on a Provincial Basis	25
Table 3	Subject - Time Allocations	28
Table 4	Changes From 1970-1979 to 1980-1983 in Scheduled Instruction Times in Elementary School Subjects: Ranges for Grades 1-6 Among Regions 1-6	29
Table 5	Percentage of Teacher Time Spent on Comprehension and Study Skills During the Reading Period	37
Table 6	Observations of Non-Instructional, Transition and General Supervision Behaviors During Language Arts Classes	43
Table 7	Observations of Non-Instructional, Transition and General Supervision Behaviors in Individual Classrooms (Expressed) as a Percentage of the Total Time for Each Classroom	46
Table 8	Observed Behavior Accounting for Two Per Cent or More of Time Scheduled for Language Arts	52
Table 9	Behavior Observed During Visits to Language Arts Classes (Expressed as a Per Centage of Observed Time)	56
Table 10	Utilization of Teacher Time on Activities Associated with Each of the Language Arts	61
Table 11	Time Utilized for Teacher Behavior Relating to Comprehension	63
Table 12	Time Utilized for Teacher Behavior Relating to Word Meaning	66
Table 13	Time Utilized for Teacher Behavior Relating to Composing	67
Table 14	Time Utilized for Teacher Behavior Relating to Spelling	69
Table 15	Time Utilized for Teacher Behavior Relating to Usage	69

[illegible]

[illegible] [illegible]

Figure 1 [illegible] [illegible]

Figure 2 [illegible]

Figure 3 [illegible]

Figure 4 [illegible]

Figure 5 [illegible]

Figure 6 [illegible]

Figure 7 [illegible]

Figure 8 [illegible]

are devoted to one topic" (Graves, 1978 b, p. 636). Speaking, listening and reading appear to have been so better served by research, from what research does exist, and from their own work, some writers (Graves, 1978 b; Searle, 1978) charge that little actual writing is part of language arts classes. Graves writes that "our preoccupation with handwriting, grammar exercises, language-arts activities to spelling books are all preliminaries, avoidances, for an event that never occurs, writing" (p. 636).

Table 1

Subcategories for the Reading Period with Largest Percentages of Time Allotted to Them

Behavioral Categories	Percentages of 8,000 Minutes
Comprehension: assessment	17.65
Non-instruction	10.72
Transition	10.67
Listens: to oral reading	9.76
Assignments: helps with	6.84
Comprehension: preparation for reading	5.63
Comprehension: helps with assignments	5.46
Assignment: given	4.72

(Durkin, 1978-1979, p. 502)

The Study

The purpose of this research was the examination of the use of time by teachers of language arts. Five upper elementary (grades 3-6) classrooms were visited during the time scheduled for the teaching of language arts over a three week period. Each classroom was visited on three consecutive days. The methodology employed was similar to that described by Durkin (1978-1979). Teacher behavior was recorded and categorized.

As Durkin's work was restricted to reading, it was necessary to create several new categories for describing teacher behavior related to the other language arts. This was accomplished by creating a Matrix of Teacher Behaviors in Language Arts.

The Matrix identified eight functions performed by the teacher and fourteen components of language arts, plus Study Skills and Miscellaneous. The eight functions are Application; Assignment: checks; Assignment: gives; Assignment: helps with; Instruction; Preparation; Review of Instruction; and Tests. The components of language arts are Composing, Comprehension, Dramatics, Handwriting, Oral Reading, Phonics, Listening, Literature, Speaking, Spelling, Structural Analysis, Usage, Viewing, and Word Meaning.

In addition to those behaviors represented by the 128 cells of the matrix, twenty-five other behaviors were identified for use in the study, bringing the total number of teacher behavior categories to 153.

The Findings

The results of this study were similar to those of Durkin. Instruction of any type was observed only infrequently, accounting for only 4.43%, or 80 minutes, of the total of 30 hours (1800 minutes) of classroom time observed.

A great deal of time was spent on activities related to assignments -- giving them (8.12%), helping them (6.80%) and checking them (15.45%). Workbook pages, and especially worksheets, were frequently used.

A great deal of time scheduled for the teaching of language arts -- nearly 38% -- was consumed by Non-instructional (23.18%), General Supervision (8.55%), and Transitional (6.12%) behaviors. The figure for the Non-instructional category was so large that three subcategories were developed reflecting the sources of Non-instructional behavior; Non-instructional: integral, Non-instructional: external, and Non-instructional: internal. Of the three, Non-instructional: internal was the most frequently observed.

The two language arts to which the most time was devoted by teachers were Reading and Writing. Well over half of the time devoted to Reading related to Comprehension, and this primarily to activities related to assignments.

Most of the time devoted to Writing was divided among three components: Spelling, Usage, and Composing. The latter component related almost totally to "creative writing" assignments, which came directly from the teachers' guidebooks of various reading series. The first two components consisted mainly of assignments from textbooks and on worksheets.

Plan of the Thesis

The present chapter briefly provides a description of this study; including background to the problem, a statement of the purpose of the study, and a description of the research process employed and of the findings.

Chapter II consists of a brief review of the literature, focussing first on the debate about the importance of the teacher to the learning process, then concluding with a discussion of time in terms of being an economic resource.

Chapter III provides a description of the methodology used in this study.

Chapter IV is both a numeric and anecdotal record of what happened during the fifteen days of classroom observation.

Chapter V concludes the thesis with a discussion of the findings, including the identification of implications for practice and suggestions for further research.

CHAPTER II

A REVIEW OF LITERATURE

Whenever a grouup gathers to discuss education, be that group composed of businessmen, parents, clergymen, students, or legislators, the focus will eventually shift to one component of the educational system. The conversation may begin with property taxes, busing, religious education, examination results, or the effectiveness of schools, but, in time, it will turn to those who inhabit the front of classrooms: the teachers. There is a belief abroad that teachers do impact on the learning which occurs in our schools. At least, in part, this is borne out by educational research.

> Research findings have made it abundantly clear that the single most important element of an effective reading program is the regular classroom teacher. Many other factors are important, of course, but these research findings suggest pupil success or failure is most directly related to the "teacher variable" in the teaching of reading (Harste, 1978, p. 32).

While research may focus on the effectiveness of a particular approach to the teaching of reading, or any other aspect of the curriculum, the results "support the idea that it is not so much the reading approach tht determines effectiveness as it is the teachers and their competency with a particular reading approach" (Rupley and Blair, 1977, p. 240). To Harste (1978), "the message (from research) is clear: Improved reading achievement is not a function solely of approach or method" (p. 32). "Now, as always, it is the individual teacher who

makes the difference -- not the materials, not even the method of reading instruction" (Cutts, 1975, p. 450).

It is entirely possible that two teachers, given the same pre- or in-service exposure and working with the same materials in similar classrooms, may get much different results.

> Institutional and social influences affect teachers, but teachers also act with considerable autonomy in making content decisions. For example, even though a district might mandate a textbook, teachers can skip whole sections of the book if they do not fit with the teachers' notions of what should be taught (Schmidt and Buchman, 1983, p. 163).

This, Harste (1978) suggests, is a result of the teachers' theoretical orientation, which he defines as a "particular knowledge and belief system about reading which strongly influences critical decision-making related to both the teaching and learning of reading" (p. 34). Although most teachers deny it, Harste contends that both the teaching and learning of reading is theoretically based.

A Debate: What Difference Does the Teacher Make?

The popular belief that teachers make a difference to the learning of children is not universally accepted. Saunders (1978) challenges researchers to test the null hypothesis: "differences in teacher behavior (other things being equal) do not account for significant differences in student achievement" (p. 186). He suggests there is evidence which tends to confirm the null hypothesis.

He contends that "most, if not all, of the variation in student achievement seems to be accounted for by sources other than schools and, by implication, teacher variables" (p. 186). He notes that "there

is considerable evidence that measures of student achievement do correlate substantially with other variables, for example, IQ or tested intelligence" (p. 187).

Much research, which concludes that the teacher makes the difference, did not begin by focussing on the teacher variable.

> Part of the reason for this disappointment may be that the teacher variable, although well established as being important, has seldom been studied directly. In fact, if the research which establishes the importance of the teacher variable is closely examined (Bond and Dykstra, 1967; Ramsey, 1962; Harris and Morrison, 1969), one finds that none of these researchers were actually studying the teacher variable directly. Their identification of the variable apparently rests largely on their inability to find significance among and between the variables they were actually studying (Harste, 1978, p. 34).

When the teacher variable is studied, it is done so in a fragmented manner. "The behavioristic analysis of teaching, as a classroom process, has typically focussed upon discrete, observable, verbal-communicative behaviors displayed by teachers in the classroom, such as asking questions, giving directions, criticizing or praising student responses, etc." (Saunders, 1978, p. 187).

Ornstein (1978) attempts to present both sides of the debate over the ability of teachers to effect student learning outcomes. Those who minimize the effect of the educational system can be placed into five groups. The new hereditarians believe that intelligence, and therefore achievement are hereditary.

> They emphasize the genetic component in determining the cognitive, and even economic, attainment of students . . . Their contention is that environment has little to do with cognitive abilities such as I.Q. or achievement, no more and perhaps less than 20 percent of the variance. Teachers are a part of the environment, but their impact is minimal since they comprise only a fraction of the environment (Ornstein, 1978, p. 62).

The environmentalists downplay the importance of genetics, focussing on the child's early years. They cite research which states that "more than 50 percent of a child's intellectual development is formed by age 4, that is, before the child enters school . . . (and) estimates that 33 percent of general learning as based on achievement indices takes place between birth and age four" (Ornstein, 1982, p. 63). Implicit in this point of view is that schools make little difference, especially in the later years.

The third point of view comes from researchers who conclude that:

> the student's family background, peer group, and social class are the most important variables associated with student achievement. Other variables such as the students' I.Q., prior achievement, motivation, and ethnic group are also important. All other variables have secondary or minimal impact on achievement. Only a small fraction of the variation in student outcomes is explained by school variables, and only a small part of this variation is attributable to teachers (Ornstein, 1982, p. 63).

Others, reflecting a fourth perspective suggest that teacher training institutions fail to provide their students with the knowledge and skills to effect student outcomes. "They imply that teachers have little expertise, that teachers learn very little in the process of being certified, and that experienced teachers have minimal impact on student learning" (p. 63).

Finally, there is a group of researchers who do not accept the argument that teachers make a difference, because they feel we simply don't know. "We are unable precisely to define and measure teacher effectiveness, that the bulk of studies on the subject to date have produced negligible or contradictory results" (p. 63). The teaching act is both too complex and too fast moving for it to be assessed.

The Teacher Does Make a Difference

In a review of research, Ornstein cites several researchers who have concluded that teachers do make a difference. He notes, however, that their research tends to be problematic.

> (It) is based on correlational rather than experimental data. The relationships cited do not prove that teacher behavior or teaching processes cause student outcomes, only that a relationship exists. It could be, for example, that certain student behaviors produce certain teacher behaviors (p. 64).

Despite the research techniques being somewhat problematic, some potentially useful data has emerged from studies of teacher behavior. Several factors have been identified as impacting on student learning. "Most of these behaviors tend to cluster around classroom management techniques and structured learning strategies, suggesting that good discipline is a prerequisite for good teaching" (Ornstein, 1978, p. 65).

Other researchers have identified:

> 11 teacher processes strongly and consistently related to student achievement and/or attitude. The first five teacher processes were the strongest: clarity, variability, enthusiasm, task orientation, and student opportunity to learn. The next six were characterized as promising: use of student ideas, justified criticism, structured comments, various types of questions, probing or encouraging student elaboration and high standards of performance (p. 65).

Ornstein concludes that the answer to the question "Do Teachers Make a Difference?" is that "We don't really know" (p. 67). He cites numerous reasons:

1. "there is a disagreement over what effects a teacher is called upon to produce" (p. 67).

2. "nearly all researchers assessing student gains . . . as criterion of teacher effectiveness have use the mean gain . . ., paying little attention to gains among individual students" (p. 67).

3. "confusion has resulted from using a variety of terms for similar purposes. For example, teacher behaviors, teacher characteristics, teacher properties, teacher competencies, and teacher effectiveness often have been used interchangeably in the research and literature" (pp. 67-68).

4. "the variable we use to assess teacher effectiveness not only vary, but even when they reappear in different studies, the meanings tend to differ" (p. 68).

5. "teacher effects are nearly indistinguishable from the effects of other teachers or agents (parents, peer groups, etc.)" (p. 68).

Effective Schools: Teachers Do Make a Difference

A group which clearly believes that teachers and schools can make a difference in student achievement and attitudes are those involved in the effective schools movement (George, 1982; Block, 1983; Rentham and Rentham, 1983; Squires, Huitt, and Segers, 1984). "Student learning was shown (by a review of research) to depend more on the people providing educational services than on school facilities and supplies" (Block, 1983, p. 3).

A number of themes are common to writing about effective schools:

1. "The principal emerged as the one who sets the focus, tone, philosophy, and direction in the school" (Squires, Huitt and Segars, 1984, p. 64).

2. "belief . . . goes beyond believing that children can and will learn. Belief also has to do with school focus, philosophy, and goals" (p. 64).

3. "Task focus, a sense of urgency, and a belief that time is valuable, all characterize effective classrooms" (p. 64).

4. "the effective teachers . . . were able to maintain discipline in their classes without spending time punishing students . . . (and) planned their lessons in advance" (p. 64).

In classrooms judged to be more effective, more time was devoted to teaching. Time frequently emerges from research as an important variable in describing student learning outcomes.

> "The most consistent finding in that student learning time is the most important variable associated with student learning. Student learning time is defined as the amount of time a student spends attending to academic tasks while the person is trying to learn. Both the active and quantity of learning time is considered to be important in explaining the success of student learning. Students of teachers who provide more academic learning time learn more than students of teachers who provide relatively little of this" (Berliner, 1979, pp. 85-87).

Time as Schools

When time is viewed as a variable related to student learning it may be seen from two perspectives, psychological or economic. "From a psychological perspective . . . time is 'a mediating element' in the process of teaching" (Bloom, 1968, p. 683). In other words, "the time spent in learning (tie) dependent upon the amount of time the student is willing to spend (perseverance) and the amount of time allocated to the task (the opportunity for learning)" (Harnett, 1983, p. 9).

On the other hand, "[a]n economist sees time as a school resource which, in combination with other resources or inputs, determines the *productivity* of the school" (p. 5). The latter view of time appears to enjoy wider acceptance among educators, as can be illustrated by these comments from Elliot Eisner (1979):

> Time is one of our most precious resources. Once it is used, it is gone, never to return again. It is, in this sense, a limited and exhaustible commodity. Thus, what we choose to "spend" time on says something about what we value. Decisions about curriculum content and the amount of time devoted to given content areas therefore not only influence the opportunities children have to learn, they also influence what children perceive to be of value in the school and in the culture-at-large" (p. 116).

[redacted]

[illegible] [illegible] [illegible] a school year of [illegible],000 hours, which, for [illegible] high school, would be [illegible],[illegible] hours, excluding "[illegible]" meeting days [illegible] and for professional development, school organization days, assemblies or similar activities where students do not receive instruction" (p. 33).

The National Commission on Excellence in Education, in the 1983 report A Nation at Risk, stressed much of the focus toward time. In its findings it made the "comparison to other nations, mentioned above, [which] [illegible] time as that in school each" (p. 21). It based the conclusion it [illegible] on:

> In Japan and other industrialized countries, it is not unusual for students [illegible] school students to spend 6 hours a day at school, 20 days per year. In the United States, by contrast, the typical school day [illegible] 6 hours and the school year to 180 days" (p. 23).

Among the Commission's recommendations related to time was "School districts and state legislatures should strongly consider . . . a 200- to 220-day school year" (p. 30).

Doerfler (1985) appears to agree with the Commission's recommendation:

> But key or even, the time children and youths spend in school appears to affect rather directly the amount of their learning as measured by tests. Increasing annual attendance from 175 to 180 days appears to enhance achievement. This suggests that states should not reduce the length of the school year even for good purposes such as improving in-service education. Days for teachers' self-improvement should be added, not taken out of the instruction of pupils. Instruction sustained year after year enhances achievement and big achievement is effective positively when studies in school are accompanied by related homework. It seems apparent that [illegible] the amount of time spent on a given subject is a powerful factor in learning. The total influence of school time appears to be greatest for subjects such as mathematics, science, and literature, not usually taught out of school, than for subjects such as reading and language, the learning of which is heavily affected by the home environment (p. 56).

Juutis (1980) "strongly agree(s) with the Commission that we need to extend both the school day and the school year, but (he) also think(s) that the Commission considered the way we use time in instruction to be just as important as the amount of time we allocate to instruction" (p. 663).

There are many factors which reduce from the 200 (in Alberta) or 180 (in the U.S.A.) days which compare the school year. "This scheduled number of days per year is reduced by student absence, teacher strikes, school closings due to fuel shortages, financial difficulties, or inclement weather" (Karweit, 1983, p. 6). In addition to these unscheduled reductions in the school year there are others which have been institutionalized, and form part of any school year at any school.

> Though the typical school year is about 180 days long, there are many reasons the number of days for mathematics instruction is far less than that. Often 1-2 weeks are lost at the beginning and end of the school year. The increased emphasis on the use of standardized and competency tests means that more time is devoted to testing. Furthermore, many days are lost because of holiday programs, field trips, assemblies, and all-school events. Instructional time is also lost because of health checks, school photos, open houses, and other activities. Although many of these events have worthy aims and contribute to broad goals of schooling, they pose problems for the teaching of mathematics, as well as other subjects. From my observations, as well as those of others, it is reasonable to suggest that 35-50 days of instruction are lost each year (Trafton, 1984, p. 522).

Time Allocations to Subjects

Eisner (1978) has provided us with two measures of what is of value within the curriculum: "the amount of time and the location of time" (p. 617). From the findings of several researchers (Fisher,

Berliner, Filby, Marliave, Cahen, and Dishaw, 1981; Eaton, 1982; Block, 1983; Karweit, 1983; Karweit, 1984; Goodlad, 1984), it is possible to draw an implication that different sets of values are influencing curricular decisions. All report a wide variance of time allocated to different subject areas.

> "To the degree that teachers were reasonably accurate in reporting the amount of time devoted each week to several subjects of the curriculum, it would appear that students varied markedly in their opportunity to learn simply because of the classrooms in which they were enrolled" (Goodlad, 1984, p. 96).

Eaton (1982) reports on how a group of elementary teachers allocated their time to various subjects:

> "Teachers in those classrooms allocated the bulk of their instructional time to the most basic of the basic skills; reading and language arts took up to 38 to 53 percent of the typical school day. Mathematics followed, taking 12 to 24 percent of the day. From 6 to 21 percent of instructional time was spent in art, music, and physical education. The observed teachers allocated little or no time to science and social studies" (p. 628).

Working with Form B's submitted by Alberta elementary school principals, Symyrozum (1979) developed a summary of scheduled instruction time for those subjects mandated by Alberta Education. As shown in Table 2, there was a large standard deviation for most subject areas. The greatest range in times was in the language arts.

These figures reflect one aspect of school life over which teachers feel they have control: what happens in their classrooms. "(I)t is commonly accepted that there is a considerable degree of teacher autonomy in the classroom but little teacher autonomy in school matters external to the classroom" (Simpkins and Friesen, 1970, p. 1). Goodlad (1984) makes a similar observation:

TABLE 2

Summary of Scheduled Instruction Times for Prescribed Elementary Subjects on a Provincial Basis

Subject						
Language Arts						
Mean	682	708	676	613	591	584
St. Dev.	117	102	95	89	70	91
Median	680	708	674	610	598	590
Mathematics						
Mean	219	241	251	255	255	255
St. Dev.	53	49	46	46	46	47
Median	215	230	248	250	250	244
Social Studies						
Mean	124	138	150	171	181	184
St. Dev.	61	60	56	52	49	35
Median	119	120	150	170	180	180
Science[a]						
Mean	83	92	100	117	124	127
St. Dev.	35	37	38	41	42	44
Median	80	90	90	113	120	120
Health[a]						
Mean	47	50	51	54	56	56
St. Dev.	26	32	32	32	33	34
Median	40	40	40	45	45	45
Physical Education						
Mean	91	93	95	97	100	102
St. Dev.	30	32	33	32	33	33
Median	90	90	90	90	90	90
Art						
Mean	69	70	70	71	72	72
St. Dev.	22	21	21	22	23	22
Median	60	62	65	65	67	68
Music						
Mean	68	68	69	70	71	72
St. Dev.	22	21	22	24	25	26
Median	60	60	60	60	60	62

Note: 1. [a]Excludes one large urban system.
2. Instruction is expressed in minutes per week.

(Symyrozum, 1979, p. 3).

> the teacher is the central figure in determining the activities, as well as the tone, of the classroom. The teacher is virtually autonomous with respect to classroom decisions -- selecting materials, determining class organization, choosing instructional procedures, and so on (p. 123).

Karweit (1983) cites an example from Maryland which demonstrates the result of too much teacher autonomy, resulting in a wide variation in time.

> . . . within one school in Maryland, the time allocated to mathematics instruction ranged from two hours and fifty minutes per week in one classroom to five hours and fifty-five minutes per week in another. Over a eyar's time, this weekly time difference means that some students receive over 100 hours more math instruction than their schoolmates (p. 9).

Assuming that a relationship can be established between the amount of instructional time allocated to a specific subject and learning in that subject, there appears to exist the potential for significant discrepancy in the achievement of students by virtue of being in different classrooms. Such an inequity may be acceptable at the senior high level where courses are selected by students. However, at the elementary level, children have no such choice.

Schmidt and Buchmann (1983) stated that "two factors may account for discrepancies in curriculum at the classroom level" (p. 162). The first of these are "external factors", including influences from sources such as "district or building policies, the principal, parents, students, or public opinion" (p. 162).

The second set of factors influencing teachers are "internal". "These teacher variables include teachers' sense of competence in teaching different areas of the curriculum and teacher beliefs and attitudes regarding curricular subjects" (p. 163).

Schmidt and Buchmann examined time allocation by six elementary teachers over a three-month period, then correlated that data with the "teachers' judgement on content emphasis, their enjoyment and their sense of competence in teaching standard subjects in the elementary school curriculum" (p. 170). Their conclusion: "Our findings suggest that internal factors, especially teachers' judgements on content emphasis and their enjoyment in teaching subjects, accounted for some of the variation in curricular time allocations at the classroom level" (p. 170).

They continue to offer a caution that there must be a balance between internal and external factors.

> As one set of factors that influence what is taught, teachers' attitudes, beliefs and judgements matter. However, there are also concerns that must be argued on behalf of students, the community, the state, and the areas of knowledge that constitute the subject matter of education. Thus, variations in time allocations that simply reflect the personal likes and dislikes of teachers are problematic (p. 170).

One external factor not listed by Schmidt and Buchmann is provincially recommended subject-time allocations. Following a review of the Symyrozum study, the Curriculum Policies Board in 1981 revised the Program of Studies for Elementary Schools (Alberta Education, 1982) to include recommended minimum subject-time allocations (see Table 3). It was noted that:

> The listed times are recommended, not obligatory. But, since they have been arrived at following investigation of prevailing practices in this province, there would appear to be some factual basis for their selection. One would expect that decisions to schedule subjects for less than the minimum recommended times must be well supported (Alberta Education, 1982, p. vii).

TABLE 3

Subject-Time Allocations

Grades 3-6 Inclusive

Subject	Percentage	Minutes
Language Arts	30%	450
Mathematics	13%	200
Science	7%	100
Social Studies	10%	150
Fine Arts (Art and Music)	10%	150
Health and Physical Education	20%	300
Undefined		

(Alberta Education, 1982, p. viii)

It might be noted that the recommended minimum times are based on 1500 minutes per week, and may have had the effect of setting a standard instructional day. "At the same time, the provision of an 'undefined time' category enables schools/teachers to increase time for one or more subjects to reflect an increased importance which they may wish to assign" (Alberta Education, 1982, p. vii).

Two years after the revisions by the Curriculum Policies Board, the Symyrozum study was replicated by an Associate Director of Curriculum, Frank Crowther (1983). He reported "significant changes in mean instructional times from 1978-1979 to 1982-1983 have occurred" (p. 5). He goes on to describe some of the changes:

> At all grade levels, the greatest decreases are in the Language Arts area, and the greatest increases are in the Health/Physical Education and Fine Arts (Art/Music) areas. Mathematics time allocations also reflect an overall significant decrease, particularly in Grades 3-6, and Science an overall significant increase, particularly in Grades 1-3. Social Studies remains generally constant across all grades (p. 6).

It would appear that action by the Province can have at leat some surface impact. Full details are found in Table 4.

Some Thoughts on the Use of Time

Having examined the length of the school year and the allocation of times to specific subjects, we should shift our attention to the expenditure of this resource in the classrooms of individual teachers. The availability of time does not guarantee learning will occur. "Time is necessary, but not a sufficient condition of learning. Learning takes time, but providing time does not in itself ensure that learning will take place. More time <u>may</u> result in more learning" (Karweit, 1984, p. 33).

Trafton (1984) provides a quotation from the National Council of Teachers of Mathematics which offers similar sentiments,

> Instructional time is a precious commodity. It must be spent wisely. Learning is a product of both the time engaged in a learning task and the quality of that engagement. Teachers must employ the most effective and efficient techniques at their command (p. 514).

Hunter (1969) makes the observation that:

> Classrooms have been accused of being slaughterhouses of times. Time is killed, and much of it wasted in the same way that, in the past, animals were slaughtered and much of them wasted. Now, industry with its emphasis on extracting everything of value, has eliminated such waste and 'everything but the moo' is used.

TABLE 4

Changes from 1978-1979 to 1982-1983 in Scheduled Instruction Times in Elementary School Subjects: Ranges for Grades 1-6 Among Regions 1-6

Subject:	Ranges of changes in minutes per week by grade					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Language Arts	-41 to -31	-79 to -22	-73 to -29	-63 to -27	-51 to -14	-46 to -13
Mathematics	- 5 to + 7	-14 to - 2	-18 to - 2	-27 to - 3	-30 to - 3	-31 to - 4
Social Studies	- 1 to +13	- 4 to + 7	+ 1 to +15	- 3 to + 4	-13 to + 3	- 7 to - 2
Science	+ 3 to +16	+ 4 to +15	+ 5 to +19	+3 to +11	- 2 to + 9	- 7 to + 7
Health	+ 3 to +14	+ 4 to +14	+ 1 to +13	- 2 to +14	- 5 to +14	- 7 to +11
Physical Education	+10 to +24	+12 to +24	+13 to +34	+11 to +25	+ 9 to +27	+ 9 to +30
Art	+ 3 to +15	+ 5 to +17	+ 5 to +16	+ 2 to +18	+ 2 to +24	+ 2 to +22
Music	+ 4 to +12	+ 4 to +14	+ 2 to +11	+ 3 to + 8	+ 3 to +11	+ 5 to +10

(Crowther, 1983, p. 6).

> In education, the current emphasis on accountability has forced similar conservation of our most valuable educational resource -- the time and energy of teacher and learner. In classrooms, that precious time and energy can be expended with great learning dividends or dissipated with little or no learning return. Educational 'conservation' can minimize or eliminate waste that occurs (p. 75).

As with any resource, we should expend classroom time wisely. "We can control the use of time in our schools. For example, school administrators are responsible for policies that reduce time-wasting distractions from learning. Teachers are responsible for managing the time allocated for classroom instruction" (Justiz, 1984, p. 483).

The message about the importance of instructional time begins with school principals.

> The actions of administrators also help determine whether students and teachers perceive instruction as the number one priority. Constant interruptions for non-essential reasons send a message that classroom instruction isn't important. Changes in the school schedule, such as putting all extracurricular activities at the end of the week, are one way to alleviate this problem (Karweit, 1984, p. 35).

Once a suitable school environment has been established, attention must shift to the individual teachers. Research, which has contributed to the effective schools movement,

> found that children's classroom behavior was much better when the teacher had prepared the lesson in advance, when the teacher arrived on time, when little time was wasted at the beginning in setting up, and when the teacher mainly directed his or her attention to the class as a whole. These findings suggest a structured classroom in which lessons begin and end on time and students' attention to the lesson is high (Squires, Huitt and Segars, 1984, pp. 58-59).

It has been noted that "teachers vary in their skill and competency in using classroom time effectively" (Karweit, 1984, p. 34).

Wyne and Stuck (1982) identify four actions that teachers can take to improve their use of time (pp. 69-70).

1. Begin and end lessons precisely on time.
2. Reduce transition time between tasks and activities in a lesson.
3. Minimize waste time.
4. Monitor all students at all times.

Levin (1981) makes other suggestions about the effective use of time.

> Thre are many ways to increase teaching and learning time during a class period. The teacher could prepare and organize plans, procedures, and materials before instruction begins, rather than in class. The teacher could also distribute learning materials to students' desks, ore prepare blackboard illustrations, audiovisual material, and other teaching aids ahead of class time. Essentially, teachers need to "observe" how they currently use class time and consider a variety of ways to increase teaching-learning time (p. 10).

The need for effective instruction was noted by the authors of A Nation at Risk (The National Commission on Excellence in Education, 1983). They recommend "that significantly more time be devoted to learning the New Basics. We require more effective use of the existing school day, a longer school day, or a lengthened school year" (emphasis added) (p. 29).

For Goodlad (1984) more effective use of classroom time is the key:

> And I repeat an earlier warning. If our interest is in quality educational experiences, we must not stop with providing only time. I would always choose fewer hours well used over more hours of engagement with sterile activities. Increasing the days and hours in school settings will in fact be counterproductive unless there is, simultaneously, marked improvement in how this time is used (p. 283).

Models for Teaching

Several educators (Minton, 1979; Hunter, 1979; George, 1982; and Squires, Huitt and Segars, 1984) have developed models of what constitutes an instructional lesson. These models indicate how time scheduled for instruction can be used effectively. To permit comparison, these four models are presented together in Figure 1.

All appear to agree with Minton (1979) that there are two key elements of an instructional lesson. First, there must be teaching; that is, some input from the teacher, be it lecture, demonstration or guided discovery. Secondly, there must be an opportunity for children to practice what they have learned under the supervision of the teacher (ie. guided practice) before being assigned work to be completed independently.

Hunter (1979) reports that too often teachers "jump" to the final stage of independent assignments without any teacher input or guided practice. Minton (1979) describes this phenomenon as "activity-ing it." She explains:

> I see teachers teaching the activity rather than teaching the content necessary to do the activity . . . I am referring to ditto activities, then another when kids can't do the first one. I am talking games, be they simulation, phonic bingo or basketball (tape 2, part III).

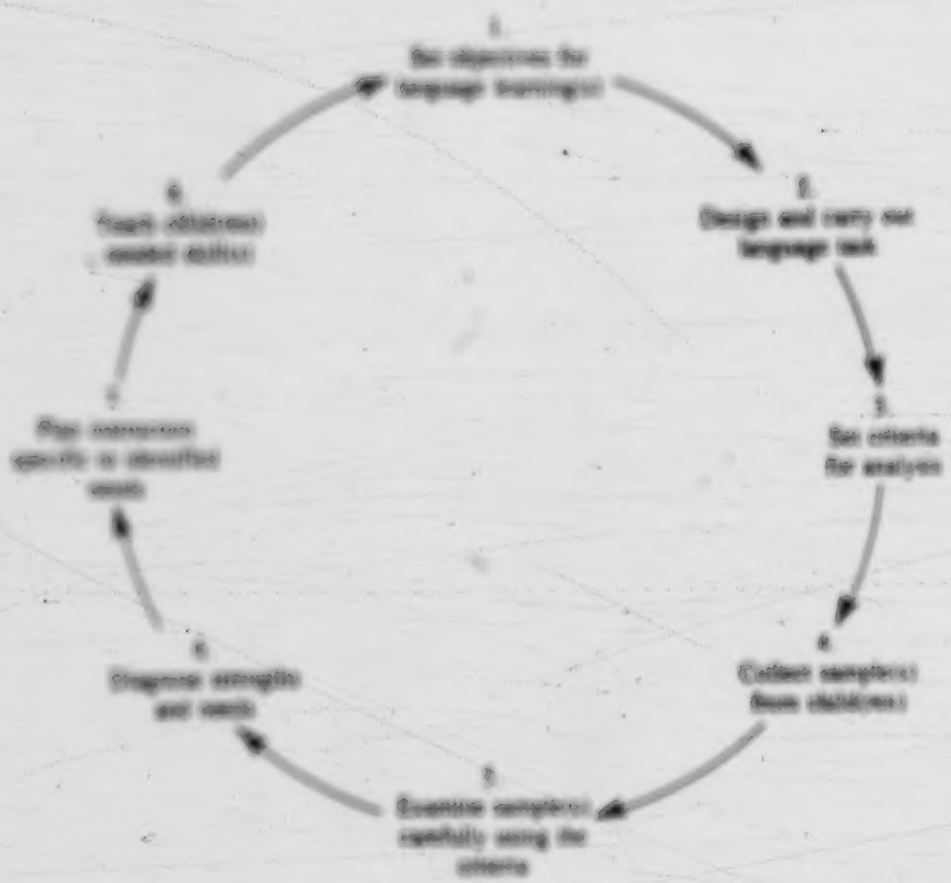
Durking (1981) observed similar behavior, which she labelled "mentioning." Mentioning

> has supplanted instruction in grades three through six. (Mentioning is saying just enough about a topic to allow for an assignment related to it.) This became apparent in the very first classroom. Specifically, a fourth-grade teacher spent one minute on contractions, then suddenly, with no explanations, switched for two minutes to the sounds of three digraphs. The explanation soon became clear in the form of two workbook assignments, one dealing with contractions, the other with digraphs (p. 453).

FIGURE 1: [illegible] FOR CLASSROOM INSTRUCTION

Hinton (1979)	Hunter (1979)	George (1982)	Aguilera, Ortiz and Navarro (1984)
Standards	Get Attention	Review Previous Work Correct Homework	
Anticipatory Set	Anticipatory Set		Overview
Pretest			
Teach	Input/Modelling	Large Group Instruction	Explanations
	Check for Understanding	Questions on Lessons (Asked by Teacher)	Students demonstrate understanding
Activity	Guided Practice	Closely Supervised Seatwork	Practice (guided)
Post Test			
Closure		Wrap-up	
Follow-up/Homework	Independent Practice	Assignment of Homework	Practice (independent)

FIGURE 2: STEPS IN THE DIAGNOSTIC PROCESS



(Alberta Education, 1979, p. 22)

Several researchers have visited classrooms and focussed on the use of time by teachers. Goodlad (1984) and an army of researchers visited 1000 classrooms in 38 schools in thirteen American communities. He reports that, at the early and upper elementary level, approximately 73% of the time scheduled for instruction is devoted to teaching activities. The balance of the time is devoted to Routines (19-21%), Behavior Control (4-6%) and Social Activity (2%).

Young (1980) visited 15 seventh- and eighth-grade classrooms in Michigan, spending three days in each. He found that "these teachers were spending an average of 75% of their time on content-related instruction" (p. 60). The range in on-task time for teachers was 55% to 88%.

In addition to determining how teachers utilized the time scheduled for instruction, Young also examined test results, discovering a significant correlation between use of teacher-time and students' achievement gains.

> The five teachers whose students made the smallest gains in reading achievement spent an average of 70% of their classroom time on academic tasks. The five teachers whose students made the largest reading achievement gains averaged 80% of their classroom time on task (p. 60).

The Durkin Study

Delores Durkin (1978-1979) was one researcher not content to rely on timetables or teacher logs to answer the question: how is time utilized in classrooms? She and two assistants visited 36 classrooms; 24 at the grade 4 level in one sub-study of this research and 3 classrooms at each of the grade 3, 4, 5 and 6 levels as another sub-study.

The central concern of her study was the teaching of comprehension, which she had earlier described as "what reading is all about" (Durkin, 1976, p. 181). Her focus for sub-studies one and two was the teacher. A third sub-study, which will not form part of this discussion, looked at the behavior of selected children in several classrooms.

Prior to entering the classroom, Durkin developed a number of definitions to describe the teacher behavior she expected -- or hoped -- to see. As her central concern was comprehension, she took most care in developing definitions for behaviors related to comprehension. As the presence of instruction was judged to be of primary concern it was the first behavior defined:

> Comprehension: instruction -- Teacher does/says something to help children understand or work out the meaning of more than a single, isolated word (p. 488).

Assuming that "comprehension instruction has transfer value" (p. 488), she defined the next term:

> Comprehension: application -- Teacher does/says something in order to learn wehter previous instruction enables children to understand the meaning of connected text not used in that instruction (p. 488).

Other definitions related to comprehension which Durkin developed include:

> Comprehension: assessment -- Teacher does/says something in order to learn whether what was read was comprehended. Efforts could take a variety of forms -- for instance, orally posed questions; written exercises; request for picture of unpictured character in a story (p. 490).

> Comprehension: assignment -- Teacher gives written assignment concerned with comprehension (p. 491).

Comprehension: helps with assignment -- Teacher helps one or more children with comprehension assignment (p. 491).

Comprehension: review of instruction -- Teacher does/says something in order to prepare children to read a given selection -- for instance, identifies or has children identify new words; poses questions; relates children's experiences to selection; discusses meanings of words in selection (p. 491).

Comprehension: prediction -- Teacher asks for prediction based on what was read (p. 491).

In recognition that aspects of reading other than comprehension would be observed at times, Durkin applied the "instruction", "review of instruction" and "application" labels to phonics, structured analysis, word meanings, and study skills, the latter having also had the label "assignment" applied. All assignmetns not related to comprehension or study skills were described under the categories Assignment: gives, Assignment: helps with, and Assignment: checks.

Two additional categories of teacher behavior were also defined:

Transition -- Time required for changing from one activity to another or from one classroom to another; for waiting for children to get to the reading table; for waiting for them to get a book or find a page; and so on.

Non-instruction -- Time given to chastisement; to waiting while children do assignments; to check papers at desk while children do an assignment; to non-instructional conversation with oneor more children, and so on.

Visits were scheduled for both reading and social studies "on the assumption that the difficulty of social studies textbooks makes the teaching of comprehension mandatory" (Durkin, 1981, p. 453).

Classrooms were visited during the period September to May, with three consecutive days being spent in each. Care was taken to ensure that the visits were spread equally over the five days of the school week.

Teachers knew in advance that they would be visited. They were selected by principals of whom "a request was made to see the best teachers. While there is no guarantee that the best (which had different meanings for different administrators) were seen, it is likely that the worse were not seen" (Durkin, 1978-1979, p. 495). Observers recorded behavior at 30-second intervals.

While Durkin entered the classrooms searching for Comprehension: instruction, she was forced to report

> "The data about teaching comprehension are easy to report because they are almost nonexistent. Comprehension instruction did not occur during social studies and it took up only 45 minutes (out of a possible 11,587 minutes) during reading periods. The average length of each of the 12 reported instances ws 3.75 minutes" (Durkin, 1981, p. 453).

This despite the fact that "surveys indicate that teachers believe reading comprehension ought to be emphasized by fourth grade" (Mason, 1983, p. 906).

Trafton (1984 reports similar findings related to mathematics

> Frequently, the amount of time devoted to instruction is limited; there is little development of content or explanation provided; skills are presented apart from their conceptual underpinnings; concepts, real-world applications, and problem solving receive slight attention; and there is undue reliance on drill alone to promote achievement (p. 515).

In sub-study 2, which examined reading comprehension on a school basis, "2 schools gave no time to comprehension instruction while the third spent a total of 4 minutes on it" (Durking, 1978-79, p. 508). In each of these schools, four classrooms were visited for three days each!

Comprehension: instruction was not to be found in the social studies classrooms visited. "All the observed teachers saw the social studies period as a time to cover content . . . no teacher saw social studies as a period to help with reading" (p. 502).

In sub-study 1, which consisted of 3-day visits to 24 grade four classrooms, the category Comprehension: assessment was the most frequently used of the categories related to comprehension, being used 17.65% of the time. Here "the concern was to see whether children's answers were right or wrong" (p. 499). Complete information for categories related to comprehension is found in Table 5.

TABLE 5

Percentage of Teacher Time Spent on Comprehension and Study Skills During the Reading Period

Behavioral Categories	Percentage of 4,469 Minutes
Comprehension: instruction	0.63
Comprehension: review of instruction	N.O.
Comprehension: application	N.O.[1]
Comprehension: assignment	2.13
Comprehension: help with assignment	5.46
Comprehension: assessment	17.65
Comprehension: prediction	0.25
Study skills: instruction	N.O.
Study skills: review of instruction	N.O.
Study skills: application	0.43
Study skills: assignment	0.16
Total:	32.24

[1]N.O. = not observed

(Durkin, 1978-1979, p. 489)

Durkin reports "workbooks and ditto sheets appeared everywhere in great numbers. Their omnipresence is reflected in the amount of time teachers pent on activities connected to assignments" (p. 499). Activities related to assignments accounted for 39.75% of the observed time.

Mason (1983) reports a study which revealed

> that 75 to 80% of instructional events involve giving directions, or supervising the filling in of, or checking the accuracy of work-sheets or of lists of words placed on a chalkboard. That is a large proportion of reading instruction consists of drills and exercises from workbooks, chalkboard or skill sheets intended in a skill-based way to teach reading (p. 211).

Another study reported "that elementary students spend up to 70 per cent of their instructional time doing seatwork" (Eaton, 1982a, p. 395).

It is clear, that in these classrooms, the workbook and work-sheet were the driving force in the classroom. The goal appeared not to be related to learning, but to the quantity of work accomplished. "For nearly everyone worksheets symbolize effort and accomplishments" (Mason, 1983, p. 212).

This excessive pre-occupation with quantity of work completed is reflect in Durkin's (1978-1979) observations about the categories Comprehension: helps with assignment and Assignment: help with.

> The help in both cases was with the mechanics or directions for an assignment, not with features that could be instructive. Mechanics and directions caused problems for children because, all too often, numerous assignments were given at the same time, the preparation for doing them was insufficient, or the directions were unclear (pp. 499-450).

Similar observations about the quality of directions are made by other researchers. "Teachers assumed but did not ensure that students understood directions, particularly when children were assigned worksheets" (Gonzales and Hansen-Krening, 1981, p. 452).

Apart from activities associated with assignments, how did the teachers observed by Durkin use the time scheduled for reading? Following Comprehension: assignment, the next two most frequently used categories were Non-instructional (10.72%) and Transitional (10.47%).

Non-instructional could very well have been higher than it was had Durkin recorded behavior from the time and period was scheduled to begin. In her study, she did not begin recording the teacher's behavior until the teacher began the class. "Since starting on time was uncommon, the selected procedure resulted in less time being assigned to Non-instructional than would have been the case had recording adhered to the official schedule" (p. 495).

Combined Non-instructional and Transition accounted for 21.19 percent of the observed time. Other categories which accounted for larger amounts of time were Listens: to oral readinh (9.76%), Assignment: help with (6.95%), Comprehension: preparation for reading (5.53%), Comprehension: help with assignment (5.46%), and Assignment: gives (4.72%).

Other Research on the Use of Classroom Time

In an earlier study, Quirk, Trismen, Weinberg and Nalin (1978) reported that teachers in compensatory reading classes "spent 30 percent of their content time in management instruction activities"

(p. 643) which they described as "transitional and directing activities that facilitate learning" (p. 642), a definition which closely parallels that of Transition from Durkin's study. Another ten percent was consumed by activities which may fit within Durkin's Non-instructional category: Positive feedback (2.93%), Negative feedback (3.10), and Extraneous (3.63%).

These four researchers focussed on both the students and teacher. "A record was made of both the group to which an observed individual was paying attention . . . and the content of the instruction" (p. 640). The data collected showed a wide variation between parallel student and teacher behavior. For example, students spent much more time engaged in Extraneous activities than did the teacher, while teachers are involved in Management Instruction for more than twice the time that individual children being observed were members of the recipient group. Such data, caused the researchers to observe that "these findings suggest that it is important to gather data on how both the teacher and student use time during reading instruction, as either set of data in itself does not present an adequate picture of the classroom activities" (p. 643).

Eaton (1982b) has summarized work done by researchers in Michigan which found that "Non-instructional time in classrooms ranged from 27 to 42 per cent" (p. 628) across all subject areas.

Hillerich (1982) describes "a modest study of what went on for 34 periods in six classrooms when teacher claimed to be 'teaching spelling'" (p. 615). Classrooms were visited for five to eight consecutive periods identified for spelling instruction. Both teacher and student behavior was recorded at one minute intervals.

Hillerich describes his findings as "several unfortunate surprises." Among these were:

- "four of the six teachers devoted 40 minutes per day to spelling. In contrast, research evidence suggests that about an hour per week is all that is necessary for spelling instruction per se" (p. 615). Alberta's Curriculum Guide for Elementary Language Arts (Alberta Education, 1978) suggests 15 minutes per day (p. 72).
- "most of the allocated time was not devoted to instruction of any kind. From 28.7 to 82.7 percent was devoted to administration or irrelevant activities" (Hillerich, p. 615).
- "The next largest portion of time was devoted to workbook correction with students. While this may imply some spelling instruction, such was not the case . . . there was no instruction on the skills; students were assigned practice pages and then graded on the results" (p. 615).

On a more positive note, Hillerich does report that "one teacher was actually 'teaching.' That teacher devoted 38 per cent of the time to talking about phonic rules" (p. 615). As well, all but one of the teachers spent time opn dictated tests.

In summarizing his description of teacher behavior Hillerich writes that "only about 50 per cent of teachers' time was devoted to anything related to spelling, and most of this time was devoted to unprofitable activities" (p. 616).

No study was provided a focus similar to Durkin's related to writing instruction, although some researchers have examined the amount of time devoted to writing. Graves (1978) summarizes the situation:

> Writing is extolled, worried over, cited as a national priority, but seldom practiced. The problem with writing is not poor spelling, punctuation, grammar, and handwriting. The problem with writing is no writing. Reading has been overstressed, often at the expense of writing (p. 636).

He draws some other comparisons between reading and writing:

> For every one hundred dollars spent for reading materials only one is spent for writing. For every two hours spent on teaching reading, only five minutes are spent on teaching writing (p. 638).

The time available each week for writing Graves estimates at 15 to 20 minutes. "The provision of more than thirty minutes per week for writing was an above average accommodation for children's writing" (p. 638).

Searle (1978) raises similar concerns about classroom practices:

> Examinations of classroom practices, however, suggest that the opportunity to learn by writing is not available to most students. A worrying feature of most classrooms is the absence of writing as a regular practice. A recent study of the amount of writing done by elementary students in Toronto indicated that the average student wrote less than one page per week, in, and out, of school (page unnumbered).

Shanahan (1979) examined practices related to writing instruction in grades 1 to 6 in fourteen schools in Delaware and Maryland. Data was collected through questionnaires sent to 167 teachers, 72 per cent of whom returned useable answers. His findings revealed that "the total writing activity (i.e., the comination of preparation time and student writing time) does not consume a significant amount of time in the elementary curriculum" (p. 216). The average time spent on writing activities was 62 minutes, per week, with a range of "0 minutes per week (grade one) to 45-60 minutes per day (second grade)" (p. 216).

Graves (1977) has also evaluated the writing component in textbooks. In grade two, he found 31% of the activities were on the mechanics of writing and 14% on the process of composing. By grade five, the mechanics accounted for 51% of all exercises and the composing element remained unchanged. Publishers explained that teachers wanted simply to mark exercises and that is what is made available. Graves concluded:

> Publishing has a powerful influence on what happens in American classrooms. It has a strong grip on what actually occurs when a child is taught to write. Most writing instruction isn't instruction at all. Rather the teacher provides the appointment for writing through assignments and then responds to the mechnical errors contained in the child's writing after it is completed (p. 832).

And once purchased, it is expected that worksheets and workbooks will be used.

> An explanation for the heavy use of paper and pencil exercises is that teachers are obligated to use them. Workbooks and skill sheets have been purchased by the district. Principals expect them to be used. Parents expect their children to bring them home (Mason, 1983, p. 912).

Conclusion

This review of the literature raises several difficulties associated with understanding how time scheduled for instruction is actually used by teachers. Firstly, unlike time-on-task research which focusses on students, little has been written about teacher time-on-task research. Secondly, what is available suffers from inconsistency in definitions from one study to the next.

Thirdly, there is no agreement on the basic unit of time to be examined. Some researchers focus on the school day, from the time the

child arrives until he leaves, including lunch and recess breaks. Others record behavior during the time scheduled for instruction, while others don't begin to record until the lesson has started.

Some researchers draw conclusions based on data collected from timetables, questionnaires, or log books kept by teachers. Others make classroom visits.

Despite these shortcomings, some patterns emerge from this research:

- a great deal of time scheduled for instruction is consumed by non-instructional or transition activities.
- there appears to be an overwhelming need to make assignments to children, primarily from workbooks and worksheets, and then to marke their responses correct or incorrect.
- very little time is actually devoted to instruction or teaching.

With no concensus in the literature about the impact of teachers on the learning of children, it is impossible to determine the significance of the foregoing conclusions about how classroom time is utilized by teachers. For those who believe the teacher makes little difference, these conclusions would seem unimportant.

On the other hand, for those of us who believe the teacher does make a difference, these conclusions are cause for concern -- and hope. While time may generally be inefficiently used in classrooms now, there is much potential for improvement. Until that increase in effectiveness in use of classroom time does occur, however, those who believe can only think "What a difference the teacher could make!"

[redacted]

[redacted]

[redacted]

The purpose of this study was to investigate how teachers of language arts in Alberta schools perceive the time scheduled for the teaching of language arts. This study followed the methodology employed by Belinda Burkitt (1978-1979) in her investigation of the use of time by reading teachers, and extended it to incorporate all the language arts as identified in the Curriculum Guide for Elementary Language Arts (Alberta Education, 1978).

The focus of the study was the teacher. Her behavior was recorded during classroom observations and later analyzed using the categories for teacher behavior developed by Burkitt, plus additional categories developed by the researcher to permit the study to be extended to all the language arts.

[redacted]

The questions to be answered by this study were: How is time scheduled for the teaching of language arts utilized by teachers? Three subquestions were also considered:

a. How much time do teachers schedule for language arts?
b. How much time is devoted to the teaching of language arts (reading, writing, spelling, listening and viewing)?

- How effectively is scheduled for the teaching of language arts utilized?

Teaching Defined

The researcher does not presume to offer the definitive definition of teaching. There may be as many definitions of teaching as there are teachers. And each, within its context, is probably valid.

The intention is to offer the reader a definition of teaching which will be adhered to within the context of this paper. For the purpose of this research, the term "teaching" will be used to describe all activities in which a teacher engages during the time scheduled for teaching. The definition excludes any activities which occur before or after the school day is scheduled to begin and end, and during times scheduled for recess or lunch breaks although many of these activities are recognized as integral to teaching. In other words, if it happens in the classroom, during time scheduled for teaching, it is teaching.

Matrix of Teacher Behavior in Language Arts

The initial task in preparation to enter the classroom was to adopt Durkin's methodology and categories so that they might be applied across the full language arts curriculum. This was accomplished by developing a Matrix of Teacher Behavior in Language Arts. This was accomplished by developing eight categories of generic teacher behavior or functions and identifying fourteen components of the language arts, plus study skills and miscellaneous.

In the discussion of Durkin's research in Chapter II it was noted that she identified eight categories of teacher behavior related to comprehension: instruction, review of instruction, application, assignment, helps with assignment, preparation for reading, assessment and prediction. Three of these categories, instruction, review of instruction and application, are also applied to other aspects of the teaching reading including phonics, structural analysis and word meanings.

From Durkin's example it appeared that all these terms might be considered descriptions of generic teacher behavior, which could be applied with equal validity to the teaching of any component of language arts, and, in fact, to teaching of any type.

There is one exception to this generalization. Prediction, as defined by Durkin, appeared suited to describing teacher behavior unique to the teaching of comprehension. In the directions for using the categories provided by Durkin "to facilitate use of them by other researchers who may wish to replicate the . . . study" (p. 493) she provides this description of Comprehension: prediction:

> . . . a teacher says something like, "now that you've read the first part of the story, what do you think is likely to happen in the next part?" (p. 528).

Apart from comprehension, listening and viewing, it is difficult to imagine this type of teacher behavior being applied elsewhere in the language arts; therefore, it was not included in the matrix.

In her study, Durkin (1978-1979) states that because

> beyond the primary grades, teachers give numerous written assignments and often at rapid rates, another decision was made to deal with assignments (with the exception of those for comprehension and study skills) under more general categories:

Assignment: gives
Assignment: helps with
Assignment: checks

(pp. 492).

In this statement, Durkin in effect created categories of generic teacher behavior which parallel those for comprehension. The creation of generic categories seemed more possible after reading Durkin's description of the category Comprehension: assessment which "is like the category Assignment: checks . . . except that it is assessment related to comprehension" (p. 528). While Durkin did not address herself to teacher behavior related to language arts other than reading, the teacher behavior she described could equally well be applied to other aspects of language arts. It seemed possible to develop categories of generic teacher behavior based on Durkin's categories.

The eight categories of generic teacher behavior or function developed from Durkin's categories are as follows:

Application -- "the teacher has children practice (use) what has been taught . . . under the supervision of the teacher" (p. 529).

Assignment: checks -- the "teacher spends time with 1 (sic) or more children in order to check answers connected with an assignment" (p. 528).

Assignment: gives -- the teacher gives an assignment to one or more children which requires the students to use skills or knowledge which relates to some aspect of the curriculum. Students are expected to complete the work independently.

Assignment: helps with -- the "teacher assists 1 (sic) or more children with an assignment" (p. 528).

Instruction -- the teacher does or says something which helps a child increase his knowledge or develop or refine a skill related to an aspect of the curriculum.

Preparation -- this includes everything a teacher (says or) does to prepare (children) for instruction or an activity before it begins . . . Preparation might also include questions or attempts to motivate the children, or to provide them with background" (p. 528).

Review of Instruction -- the "teacher offered earlier . . . instruction and now takes time to review or repeat it" (pp. 528-529).

Tests -- "the teacher is engaged in an effort to test in a formal way -- a written, end-of-week test, for example" (p. 530).

With the categories of generic teacher behavior in place, it was next necessary to identify the component of language arts to which these can be applied. Durkin has already supplied some: comprehension, structural analysis, phonics, listening, oral reading, word meaning, and study skills. All of these, except the latter, which transcends all curriculum areas, are aspects of reading, one of the five strands of the language arts curriculum in Alberta (Alberta Education, 1978).

A review of Alberta's Elementary Language Arts Curriculum Guide (Alberta Education, 1978) suggests other components of language arts: handwriting, spelling, usage, viewing, composing, speaking, literature, and dramatics.

Based on Durkin's study, material contained in the Alberta Curriculum guide, and observations of classroom practice, it was possible to develop definitions for each of these aspects of language arts:

Comprehension -- the ability to "understand or work out the meaning of more than a single work" (Durkin, 1978-1979, p. 528).

Dramatics -- the use of plays, skits and spontaneous drama.

Handwriting -- the mechanical process of using manuscript and cursive forms.

Oral reading -- the oral delivery of written material.

Phonics -- the ability "to use the conventions that exist between spellings and pronunciations for word definitions" (Durkin, 1976, p. 285).

Listening -- "the process by which spoken language is converted to meaning in the mind" (Alberta Education, 1978, p. 36).

Literature -- the use of non-textbook materials, such as trade books, "which represent variety in genre and theme and which appeal to a wide range of interests and reading ability" (Alberta Education, 1978, p. 36).

Speaking -- the use of oral language to convey ideas to an audience.

Spelling -- a "conventional activity in which an attempt is made to relate spoken language to written language according to actepted usage" (Alberta Education, 1978, p. 71).

Structural Analysis -- the study of "the structure of derive, inflicted or compound words" (Durkin, 1978-1979, p. 530).

Study Skills -- the skills necessary to learn more effectively "(e.g., outling, SQ3RR, skimming, varying rate to suite purpose and difficulty of material)" (Durkin, 1978-1979, p. 530).

Usage -- "the system of word structures and word arrangement in the language" (Alberta Education, 1978, p. 57); grammar.

Viewing -- the ability "to (understand and respond) to experiences which are organized and conveyed visually" (Alberta Education, 1978, p. 41).

Word Meaning -- vocabulary development.

Miscellaneous -- all other aspects of the curriculum, whether related to language arts or other areas.

With eight teacher functions defined and fourteen components of language arts, plus study skills and miscellaneous identified, it was possible to develop the Matrix of Teacher Behavior in Language Arts. The matrix was constructed by listing the teacher functions across the top and the components of language arts down one side (see Figure 3).

FIGURE 3. Matrix of Teacher Behavior in Language Arts

Teaching Function / Component	Appli-cation	Assign.: checks	Assign.: gives	Assign.: helps with	Instruc-tion	Prepar-ation	Review of instruc-tion	Tests
Composing								
Comprehension								
Dramatics								
Handwriting								
Listening								
Literature								
Oral Reading								
Phonics								
Speaking								
Spelling								
Structural Analysis								
Study Skills								
Usage								
Viewing								
Word Meaning								
Miscellaneous								

The matrix can be used to develop a description for each teacher function applied to each component of language arts. For example, if one drew a verticle line down from the teacher function "application" and a horizontal line across from the language arts aspect "Spelling", we would define Spelling: application as 'the teacher has children practice using a spelling ocncept (eg., "i" before "e" except after "c") under her supervision."

As well a proving an easy means of defining teacher behavior applied to specific aspects of language arts, the matrix provides a means of reporting data.

Additional Categories of Teacher Behavior

In addition to the 128 categories which are generated by the matrix, it was necessary to identify other categories to describe teacher behavior which might be observed during classroom visits.

As mentioned earlier, Durkin found it necessary to create categories of teacher behavior which were not specific to any component of reading, indeed to any component of language arts or any other curriculum area. Those categories, which include Collects material, Distributes materials, Non-instructional, and Transition, were incorporated into this study.

Other Durkin categories which relate to one or more aspects of the curriculum but did not fit the matrix, were also used. These include Comprehension: prediction, Demonstrates, Diagnosis: checks information, Diagnosis: uses, Discussion: teacher directed, Listens: to oral reading, Listens, Map making, Map reading, Reads aloud, Review:

oral, Silent reading: children, Sustained silent reading, and Word identification practice. Directions for applying these categories have been included in Appendix I.

In expanding Durkin's study to the entire language arts curriculum it was necessary to add six categories related to components of language arts or teacher behavior in the classroom, which did not fit the matrix:

Audio Visual Equipment -- the teacher prepares audio visual equipment for use by the children or the teacher.

Locates Information -- the teacher assists one or more children to locate information in a resource book or dictionary, or locates information on the children's behalf.

Views -- the teacher watches the same film, film strip or video tape as the children.

Composing: consults -- while the students are involved in the process of writing, the teacher responds to the content of what the children are writing on an individual or small group basis.

Composing: discusses -- the teacher provides the opportunity for the class or a group of children to comment on another child's writing.

When the study was piloted, it appeared that another category of teacher behavior was necessary to describe a common teacher behavior. Once an assignment was made and students began to work, the teacher observed would walk up and down the rows of desks for a period of time. This behavior appeared to have had two purposes. Firstly, the proximity of the teacher seemed to keep students on task. Secondly, the teacher appeared to be observing what the students were doing, and to be available to assist individual students.

The Durkin category which best described this behavior is Non-instructional -- "Time given . . . to waiting while children do an

assignment" (Durkin, 1978-1979, p. 493). As the behavior described above provides both the policing function of keeping children on task and has the appearance of increasing the availability of the teacher to provide assistance, it was felt that a new category was required to distinguish this Non-instructional behavior from other more obvious non-instrucitonal behavior such as "chastisement . . . checking papers at (the teacher's) desk, . . . non-instructional conversation with one or more children" (Durkin, 1978-1979, p. 493), balancing checkbooks, visiting with a neighbouring teacher or leaving the classroom to take a telephone call. This new category of teacher behavior was labelled General supervision.

It should be noted that when this pacing stopped, and the teacher directed her attention to one or more students, or returned to her desk, the category General supervision was no longer used to describe the teacher's behavior. Rather a more appropriate category, such as Assignment: helps with, Review of instruction, or Assignment: checks was employed.

With the 128 categories from the Matrix of Teacher Behavior in Language Arts and 25 categories which did not fit the matrix, there were 153 distinct categories available to the researcher to classify the teacher behavior observed during the classroom visits.

Pilot Study

Prior to commencing the actual research, two pilot classrooms were visited. The first visit was to test the researcher's ability to use the observation sheets. When this proved possible, a visit to a second pilot classroom was arranged.

Before this visit, a second researcher was trained in the use of the instrument and the categories. Both researchers visited the same classroom, making independent records of the teacher's behavior. Working independently, both researchers categorized the behavior of the teacher observed. The resulting inter-rater reliability was 75%.

After further discussion of the categories, and the introduction of the General supervision category, and some adjustment for timing difficulties (the second observer did not use a digital watch), data was reanalyzed by both researchers, again working independently. As a result of this process the inter-rater reliability was increased to 89%. This level of inter-rater reliability, made it possible to proceed with a single observer in classrooms with some degree of confidence.

The Teachers

Arrangements were made with the superintendent of a school jurisdiction near Edmonton to visit six different schools for the purpose of this research. One school was to be used for pilot purposes, the others for the actual study.

The individual schools were approached through the principal, to whom the project was described. Like Durkin, the researcher asked to visit the classroom of a "good language arts teacher" in grades three to six. No criteria were provided to the principal as to how to make this choice.

This procedure was selected for a number of reasons. By asking to see a good teacher, the researcher hoped to avoid observing the

worst. Secondly, a teacher who was seen by her principal as "good" was less likely to become nervous when observed, which might distort the results. Having principals apply their own operational definitions of a "good language arts teacher" avoided the need to develop a set of criteria which might prove cumbersome to apply and reduce the willingness of principals and teachers to cooperate with the researcher.[2]

The results of the selection process was one grade three, one grade five and three grade six teachers. Another grade six classroom was used for the pilot. There were four female and one male teachers whose classrooms were visited.

Brief meetings were held with each teacher a day or two before the classroom was to be visited to explain the purpose of the study ("to watch how you use your time during language arts classes"), to describe the procedures to be used by the researcher. This meeting also provided the teacher with the opportunity to withdraw from the study if she wished. All opted to continue.

During this interview, times scheduled for the teaching of language arts were identified.

---

[2]In later discussions with principals they were asked how teachers had been selected. The response varied. In one case, the principal considered standardized test results; another relied on his own classroom observations; and a third said that the other teachers had had student teachers so the teacher was selected "because it was her turn." No effort was made to determine whether any relationship existed between the principals' criteria and the observed utilization of time.

The Visits

The study occurred over a three-week period during late April and early May, 1980. Visits to each classroom were scheduled for three consecutive school days: Monday, Tuesday and Wednesday, for the first classrooms; Thursday, Friday and Monday for the next; Tuesday, Wednesday and Thursday for the next, and so on.

By visiting the classroom in April and May the researcher avoided any holiday period, something with which Durking had to contend:

> Teacher and/or administrators did not permit visiting, for example, at the very beginning of the school year, or at the very end. Nor were teachers willing to be observed during the weeks that preceeded Thanksgiving and Christmas. Even days like Halloween and Valentines' Day had to be omitted (Durkin, 1978-1979, p. 495).

Time limitations prevented spreading the observtions over the entire school year as done by Durkin "on the assumption that the quality of an instructional program also varies at different times during the school year" (Durkin, 1978-1979, p. 494).

By visiting the classrooms on consecutive days the researcher began to sense the flow of teaching and the nature of normal instruction in the classroom as teacher and children became comfortable with the presence of the observer. By visiting the classrooms on all days of the week, any impact of certain days on the results were compensated for. "On the assumption that both the content and the quality of instruction varies on different days of the week, the 3-day visits were scheduled so that all 5 days of the week would be included with equal frequency by the time the research terminated" (Durkin, 1978-1979, p. 494).

Data Collection

Data was collected through classroom visits with the researcher in the role as "observer-as-prticipant" which is described as being "completely open about (the) research objectives and (approaching) people on that basis" (Williamson, Karp, and Dalphin, 1977, p. 206). Not only did this procedure replicate that of Durkin, but also classroom observation has been described by Wyne and Stuck (1982) as "the most desirable method of collecting data" although "unfortunately, the most time consuming and expensive" (p. 69).

Teacher behavior was recorded at thirty-second intervals during the time scheduled for the teaching of language arts. Information was recorded on sheets divided into five columns.

Time	Teacher Behavior	Audience	Source, Other Information, etc.	Category

The first column is the time at which observations occurred, divided into thirty-second intervals. The times were entered before the researcher entered the classroom each day.

In a departure from Durkin's procedure, teacher behavior was recorded from the time the teacher of language arts was scheduled to begin, not from when it actually began. In Durkin's study

> The researchers started recording and timing behavior not when an official schedule indicated a period was to begin but, rather, when it actually began. Since starting on time ws uncommon, the selected procedure resulted in less time being assigned to Non-instructional than would have been the case had the recording adhered to the official schedule (Durkin, 1978-1979, p. 495).

Given the concern about how much classroom time is devoted to various subjects (Jorgensen, 1978; Fraser, 1983; and others) it seemed inappropriate to time only from when teaching actually began. Adhering to scheduled times produces a more accurate picture of how time scheduled for teaching language arts is actually utilized.

During the classroom observations, the researcher used a digital watch which showed time in hours, minutes and seconds. It was recognized that "school time" might not be synchronized with "actual time," therefore in all cases, recording began when a bell signalled the beginning of a period scheduled for language arts and ended with the next bell. Once the recording began the lack of synchronization became irrelevant as the focus was on the teacher's behavior during each subsequent thirty-second interval.

In the second column a description of teacher behavior was recorded. This included what the teacher said and did, where she was located and in what activity she was involved. Behavior was recorded for each thirty-second interval. In those cases where two or more behaviors occurred within the same thirty-second interval, this information was recorded and later the two or more behaviors categorized in the third column, and tallied appropriately.

When applicable, the audience towards which the teacher's behavior was directed was recorded in the third column. The audience might have been one child, a group of children, the whole class, or another teacher.

Again, when applicable, other information relating to sources of assignments (textbook, page number, etc.), the nature of the student

involvement, and other information which the researcher felt relevant at that time, was recorded in the fourth column.

The fifth column was completed following the end of the observation period, using the categories as developed by Durkin and the researcher. To supplement the written record of teacher behavior, all classes were recorded on cassette tape, and copies made of all textual materials, including teacher guides. Copies of worksheets were also obtained. These materials were reviewed in the process of categorizing teacher behavior.

Additionally, teachers' lesson plans were reviewed daily and a discussion held with the teachers following each series of classroom visits. The resulting information was also used in the categorizing process. A sample of completed observation sheet is shown in Figure 4.

Summary

In preparing for the collection of data, a number of steps had to be taken. Durkin's categories of teacher behavior, which related primarily to reading, had to be adapted to describe teacher behavior associated with all the language arts. This was done through the development of the Matrix of Teacher Behavior in Language Arts. Additional categories which did not fit the matrix were also identified, until a total of 153 categories of teacher behavior were available for this study. A means of collecting data, on a classroom observation sheet, was developed. Both the observation sheet and the categories were piloted in two classrooms. An inter-rater reliability of 89% was calculated during the piloting process.

FIGURE 4. Sample of a Completed Observation Sheet

Time	Teacher Behavior	Audience	Source, Other Information	Category
9:01	Bell rings, Teacher in staffroom			N.I.
9:01:30	Walks to classroom			N.I.
9:02	Starts children on show and tell			TRAN
9:02:30	Asks questions re: show and tell items			DISC
9:03	Has children clear art work from desk			TRAN
9:03:30	Do part C of spelling		Spelling in LA "creative writing"	Composing Assign.: Gives
9:04	Tells class to put information in booklets			Composing Assign.: Gives

Five teachers from five different elementary schools agreed to participate in the study.

The data collected during fifteen days of classroom observation is presented in Chapter IV.

CHAPTER IV

THE FINDINGS

The classroom observations occurred over a fifteen day period and totalled 1600 minutes, or 30 hours, spent in five different classrooms. This constituted all the time scheduled by these five teachers for language arts, except for approximately thirty minutes not observed due to the researcher being late in arriving in one of the classrooms. The average class period was two hours long.

Four teachers scheduled language arts as a distinct subject, while the fifth had children involved in individual programs in both language arts and mathematics from the time they arrived each morning until the lunch break. This teacher spent much of her time at her desk, with her back to the class as she marked children's assignments while several students lined up to see her.

In the case of this classroom, activities related to mathematics were classed under those categories related to the component Miscellaneous.

Of the 153 categories of teacher behavior available to the researcher, eighty-two were used to categorize the behavior of at least one teacher on at least one occasion. The most frequent (Non-instructional) was used 835 times and the least frequent (Handwriting: Assignment: given, and Handwriting: instruction) only once. Seventy-one categories were not used at all. All but two of the categories of

one categories were not used at all. All but two of the categories of

63

teacher behavior not observed were from the matrix of teacher behavior in language arts, the development of which is described in Chapter III.

No teacher behavior of any sort was observed related to two components of language arts, oral reading and speaking.

Reporting of Findings

From the first of the classroom visits, it became obvious that the data collected would need to be reported in two fashions. It would, of course, be reported numerically, as had been done by Durkin (1978-1979). But numbers alone did not seem sufficient to permit the reader to understand what had happened in these classrooms.

In addition to the tables, it seemed necessary to provide descriptions of teacher behavior to illustrte the more frequently observed categories. Such "snapshots" of classroom life would help to establish the limits of the categories which were defined in Chapter III.

Data will be reported in the Chapter first in terms of the twelve most-frequently observed behaviors, which includes a listing of all observed behaviors. The second analysis will focus on the five language arts. Finally, the data will be presented within the framework of the eight generic teacher behavior categories or functions.

Three Most Frequently Observed Behaviors

The three categories most frequently used to describe the teacher behavior observed were Non-instructional, General Supervision, and Transition. Together, as is shown in Table 6, they accounted for 37.85 per cent of all observed time in the five classrooms. All these

TABLE 6

Observations of Non-instructional, Transitional, and General Supervision Behaviors During Language Arts Classes

	Number of classrooms in which behavior was observed (maximum: 5)	Number of days on which behavior was observed (maximum: 15)	Frequency of observed behavior (number of 30-second intervals)	Frequency of observed behavior (expressed as a percentage of total time)
Non-instructional	5	15	835	23.18
General Supervision	5	14	308	8.55
Transition	5	15	220.5	6.12
Total:	n/a	n/a	1363.5	37.85

behaviors were observed in all classrooms.[3] The categories Non-instructional and Transition were used to describe teacher behavior observed on each of the fifteen days. General Supervision was used for fourteen of the fifteen days.

Three Types of Non-Instructional Behavior: Integral, External and Internal

With nearly one of every four minutes of time scheduled for the teaching of language arts being consumed by Non-instructional teacher behavior, a further analysis of teacher behavior categorized as Non-instructional appears warranted. The analysis suggests that some Non-instructional teacher behavior is an integral aspect of the operation of a classroom. There are times when a child requires either chastisement or comforting. As well, there are obviously occasions when a teacher may speak briefly with a child on matters unrelated to the curriculum, such as the arrival of a new baby, the results of a child's hockey game the night before, or the state of health of a child's favorite pet.

Many elementary teachers pride themselves as: "teachers of children, not subjects." This type of Non-instructional behavior adds a human element to the classroom which may contribute to children feeling at ease. This behavior, labelled "Integral", was the least frequently observed subset of the category Non-instructional.

[3]Three other categories described behaviors which were generally non-instructional in nature: Collects Material (.47%), Distributes Material (.90%), and Audio Visual Equipment (1.14%). Added to the three most frequently observed categories, the six total 40.36 percent of observed time.

The second most frequently observed Non-instructional subset can be described as "External." Examples of teacher behavior which fits this subset includes time spent listening to and responding to announcements over the intercom, talking with the principal at the classroom doorway during class time, or a long string of money-collecting or information gathering activities which usually originate with the school's administration. This category also includes time spent on school-wide opening exercises such as singing O Canada, saying The Lord's Prayer, or engaging in an activity called the "Health Hustle" which involves the entire student and teaching population in one school twisting and gyrating as music is played over the intercom.

However, not even when combined do the Integral and External subsets come close to the amount of Non-instructional time which was teacher generated, referred to as "Internal." Given the opportunity of working with children or engaging in Non-instructional activities teachers frequently opted for the latter.

The pattern which emerged in the classrooms was one of moving as quickly as possible to what appeared to be the focus of the time scheduled for language arts: the assignment. Having dispensed with preparation (or motivating) and instruction activities, the teacher told the children how to complete the worksheets or workbook pages. With the children now set to work, the teacher usually demonstrated the behavior described as General Supervision, moving up and down the aisles for a few minutes before moving to their desks where they engaged in such classroom-related, yet Non-instructional activities, as marking previous assignments, preparing materials for use by students,

or planning for the next day. Occasionally teachers would read material unrelated to the classroom's operation and, on one occasion, the teacher spent the time while students worked on worksheets to balance her chequebook. Other teacher-generated Non-instructional activities included the teacher waiting in the staff room "for the children to get settled" or simply leaving the classroom for reasons such as making a phone call or visiting with another teacher.

Adherence to Scheduled Time

Durkin (1978-1979) observed that "starting on time was uncommon." This was also the case in this study, with only one teacher beginning on time, something which occurred on two of the three visits to that classroom. While teachers usually started only two to five minutes after the scheduled commencement, occasionally this delay exceeded ten minutes and once extended to twenty-nine minutes, due in part to the need to participate in the "Health Hustle."

It should be noted that while starting on time was uncommon, ending on time was nearly as uncommon. On approximately half the days during which observations were made, the teacher continued with whatever she was doing until after a bell signalled the end of the time schedule for language arts. Only one teacher consistently had students prepared for dismissal before the end of the time schedule for language arts. In those cases where teaching continued after the bell, which usually was for only a minute or two, the researcher continued to record the teacher behavior. However, when teaching ended before the

bell, the researcher continued to record the teacher's behavior until the bell signalled the end of the tiem scheduled for language arts. Generally this was categorized as Non-instructional time.

General Supervision and Transitional

Behavior categorized as General Supervision and Transition fit the definitions discussed in chapters IV and III. Having given the assignments, the teacher circulated up and down the rows as children worked, providing General Supervision. General Supervision was frequently followed by Non-instructional time as the teacher diverted her attention from supervising the children as they worked to activities which did not directly relate to the work being done by the children.

Transition behavior related generally to the time the teacher simply waited as children assembled materials on their desks or put them away so that teaching could begin. Non-instructional, General Supervision, and Transition behavior was observed in all classrooms, and, except for one case, observed each day. It is important to note, however, that the degree to which these behaviors occurred varied considerably from classroom to classroom.

For example, the overall time categorized as Non-instructional was 23.18 percent of all observed time. The range of Non-instructional time in different classrooms was from 16.18 to 27.24 percent of the observed time. Overall, General Supervision accounted for 8.55 percent of observed time. The range was from 3.24 to 17.16 percent. The overall figure for the Transition category was 6.12 percent, with a range of 2.53 to 7.62 per cent.

When these three most frequently observed categories are combined, they account for 37.85 percent of all the observed time. In individual classrooms, the range of the combined total of these behaviors is from 27.65 to 43.91 per cent. Further information on the observations of Non-instruction, General Supervision, and Transition, in individual classrooms is found in Table 7.

TABLE 7

Observations of Non-instructional, Transitional, and General Supervision Behaviors in Individual Classrooms (Expressed as a percentage of total time for each classroom)

	Total number of 30-second intervals observed	Non instruc-tional	Transi-tional	General Super-vision	Total
Teacher No. 1	639.5	16.18	6.65	6.49	29.32
Teacher No. 2	645	24.56	6.25	8.57	39.38
Teacher No. 3	693.5	27.24	7.62	6.95	41.81
Teacher No. 4	719.5	20.08	6.67	17.16	43.91
Teacher No. 5	633	21.88	2.53	3.24	27.65
All Classrooms	3600.5	23.18	6.12	8.55	37.85

An interesting relationship between the amount of time scheduled for the teaching of language arts and the amount of behavior categorized as Non-instructional, General Supervision, and Transitional appears. Teacher No. 5, who scheduled the least amount of time for the teaching of language arts, also spent considerably less of this time on General Supervision and Transitional activities than the other teachers and below the average time associated with the behavior category Non-instructional.

The teacher who scheduled the next lowest amount of time for teaching language arts had the second lowest score for all three areas. The relationship persists for all teachers: the greater the amount of time scheduled for teaching language arts, the greater the portion of this time spent on the combination of Non-instructional, General Supervision, and Transitional activities. If these three behavior categories can be seen as inefficient use of time by teachers, then it may be possible to generalize that the less the amount of time available for the teaching of language arts, the more efficient teachers become in utilizing the time. Unfortunately the sample was small, so that the generalization is of dubious value.

The Next Nine

Nine other categories used to describe teacher behavior each accounted for two percent or more of the observed time. These are shown in Table 8. Together they account for 25.28 per cent of the observed time. When these are added to time utilized for Non-instructional, General Supervision, and Transitional activities, these top twelve behaviors account for 63.12 per cent of the observed time.

An examination of the nine categories begins to reveal something about what these five teachers viewed as most important in the language arts. Four Comprehension related behaviors are included in this group of nine, combining to account for 12.14 per cent of observed time. All behaviors were observed at least once in each classroom, although it should be noted that Comprehension: preparation -- which describes a variety of motivation activities -- was observed only once in each classroom.

TABLE 8

Observed Behavior Accounting for Two Percent or More of Time Scheduled for Language Arts

	Number of classrooms in which behavior was observed (maximum: 15)	Number of days on which behavior was observed (maximum: 15)	Frequency of observed behavior (number of 30-second intervals)	Frequency of observed behavior (expressed as percentage of total time)
Comprehension -- Assignment: checks	5	10	190.5	5.29
Comprehension: Preparation	5	5	95.5	2.65
Sustained Silent Reading	1	3	83	2.30
Comprehension -- Assignment: helps with	5	9	81	2.25
Discussion: Teacher Directed	4	10	80.5	2.23
Spelling -- Assignment: checks	3	6	79	2.19
Composing -- Assignment: checks	3	5	78.5	2.18
Comprehension -- Assignment: gives	5	12	76	2.11
Listens	5	8	74	2.05
Total:	n/a	n/a	838	23.25

The real emphasis in comprehension appears to have been on assignments -- giving them, helping students complete them, and checking them. Durkin (1978-1979) uses the term "assessment" instead of Assignment: checks in relation to comprehension. Its use is appropriate as these assignments seem more to test the students' ability to recall what they read than to improve their ability to understand the printed page. Almost exclusively, these were paper and pencil activities, involving either workbooks or worksheets. What is not reflected in these figures is the amount of time that students worked on comprehension assignments as teachers were often involved in Non-instructional or General Supervision activities while students completed worksheets.

While these four comprehension related activities were among the most frequently observed behaviors, Comprehension: instruction was found to be as elusive in Alberta classrooms as in those visited by Durkin and her associates. Instruction related to comprehension was only observed twice, for a total of seventeen and one-half minutes (.97% of the total time), 9.6 minutes in one classroom and eight minutes in the other. Comprehension: instruction rated twenty-ninth in the list of the eighty-two behaviors observed. For a list of all other observed behaviors, see Table 9.

Sustained silent reading was only observed in one classroom on each of three days the classroom was visited. There was, however, the potential for this behavior to have been observed more frequently. Three teachers scheduled time for sustained silent reading, although in different schools it had different labels. Here the significance of

TABLE 9

Behaviors Observed During Visits to Language Arts Classes (Expressed as a Percentage of Observed Time)

Rank		Percentage of Total Time
1	Non-instructional	23.18
2	General Supervision	8.55
3	Transition	6.12
4	Comprehension -- assignment: checks	5.29
5	Comprehension -- preparation	2.65
6	Sustained Silent Reading	2.30
7	Comprehension -- assignment: helps with	2.25
8	Discussion: Teacher directed	2.23
9	Spelling -- assignment: checks	2.19
10	Composing -- assignment: checks	2.18
11	Comprheensio -- assignment: gives	2.14
12	Listens	1.05
13	Usage -- assignment: gives	1.94
14	Composing: preparation	1.83
15	Views	1.72
16	Miscellaneous: instruction	1.67
17	Miscellaneous -- assignment: helps with	1.67
18	Miscellaneous -- assignment: checks	1.47
19	Listening: preparation	1.44
20	Spelling: tests	1.24
21	Miscellaneous -- assignment: gives	1.19
22	Spelling -- assignment: gives	1.18
23	Spelling -- assignment: helps with	1.18
24	Audio visual equipment	1.14
25	Reads aloud	1.11
26	Composing -- assignment: gives	1.01
27	Usage -- assignment: checks	1.00
28	Comprehension: instruction	.97
29	Dramatics -- assignment: checks	.96
30	Composing: discusses	.96
31	Usage: review of instruction	.94
32	Distributes Material	.90
33	Composing -- assignment: helps with	.90
34	Silent reading: children	.87
35	Usage: instruction	.85
36	Viewing -- assignment: checks	.78
37	Review: oral	.67
38	Handwriting -- assignment: checks	.65
39	Miscellaneous: application	.58
40	Spelling: preparation	.56

TABLE 9 (cont.)

Rank		Percentage of Total Time
41	Word Meaning: instruction	.49
42	Collects Materials	.47
43	Usage: instruction	.44
44	Usage -- assignment: helps with	.40
45	Composing: shares	.39
46	Structural analysis -- assignment: checks	.39
47	Literature -- assignment: checks	.31
48	Composing: consults	.31
49	Listening -- assignment: checks	.29
50	Study Skills -- assignment: helps with	.28
51	Word Meaning: application	.26
52	Comprehension prediction	.25
53	Miscellaneous: tests	.24
54	Listens: oral reading	.24
55	Spelling: instruction	.22
56	Structural Analysis -- assignment: gives	.22
57	Phonics: application	.19
58	Composing: instruction	.19
59	Dramatics -- assignment: gives	.17
60	Miscellaneous: review of instruction	.17
61	Dramatics: preparation	.14
62	Viewing: preparation	.14
63	Phonics -- assignment: checks	.12
64	Spelling: review of instruction	.12
65	Miscellaneous: review of instruction	.11
66	Word Meaning -- assignment: gives	.11
67	Word Meaning -- assignment: checks	.10
68	Structural Analysis -- assignment: helps with	.08
69	Structural Analysis: review of instruction	.08
70	Composing: review of instruction	.08
71	Map Reading	.08
72	Locates Information	.08
73	Diagnosis: uses	.08
74	Phonics -- assignment: gives	.05
75	Phonics: review of instruction	.05
76	Handwriting: tests	.04
77	Word Meaning -- assignment: helps with	.04
78	Literature -- assignment: gives	.03
79	Spelling: application	.03
80	Structural Analysis: instruction	.03
81	Handwriting -- assignment: gives	.01
82	Handwriting: instruction	.01

the distinction between teacher behavior and student behavior is important. When the teacher reads while the students read, which research suggests is necessary if the technique is to be effective (Sadosky, 1980), the teacher's behavior was categorized as Sustained silent reading. But, in the case of two of the three teachers who included sustained silent reading in the time schedule for language arts, the time while students read was used as a preparation period by the teachers, a time for recording test results, preparing worksheets, or planning the next day's (or that afternoon's) lessons. In these cases, the teacher's behavior was categorized as Non-instructional, unless the teacher changed to an activity that could be categorized in some other manner. Without the teacher as a role model, the effectiveness of this technique as anything but a time-filler must be examined.

Teachers were observed directing classroom discussion (Discussion: teacher directed) on ten occasions, in four different classrooms. Two characteristics of these discussions emerged. First, the topic for the discussions nearly always was found within the pages of a teacher's guidebook, usually part of a reading series. Secondly, all contributions appeared to need to be legitimized by flowing through the teacher. In most discussions, every time a student made a contribution it was restated or paraphrased by the teacher before another child was willing (or allowed) to respond to the idea. Discussions tended to be brief, usually lasting less than five minutes.

There ws one notable exception. Part of one class had been away at a puppet show the previous day with another class. This teacher appeared to know little about what had happened at the puppet

show, asking a question which started the discussion. One child began the description, with others adding or clarifying facts, without the first child's words passing from the teacher's ear to her mouth before the second child spoke. The teacher would occasionally interrupt with a question, the answer to which genuinely appeared to be of interest to her. This discussion, which at times appeared more child-directed than teacher-directed, consumed thirteen minutes, and accounted for a third of the total time in this category.

Spelling -- Assignment: gives was observed in three different classrooms. In each case, this behavior related directly to the text-book used by the students, which provided a series of exercises for each week's word list. These assignments were made to the students who completed them before the class reviewed the answers a day or two later.

When engaged in behavior categorized as Composing -- assignment: checks, the teacher had the students read to her or the class what the student had written in response to a writing assignment given earlier by the teacher. The teacher's response was limited to two types: a brief, positive response (eg. "That's an exciting story," or "Sounds good to me") or the identification of usage or punctuation errors. No discussion of the contents of the child's writing occurred.

Teacher behavior categorized as Listens occurred mainly in one classroom where the teacher employed a listening program on cassette tapes. While the students listened to the tape, the teacher also listened, occassionally making notes about the contents of the tape.

The Five Language Arts

In the previous chapter, much of the narrative focussed on the development of a matrix of the components of language arts and generic teacher behaviors or functions. In addition, other teacher behaviors were identified which did not fit the matrix, but could be anticipated to be observed in a language arts classroom.

Information from the matrix and additional categories can be used to provide three analyses of the findings of this study: the first based on the five language arts, the second on the components of language arts, and the third, on teacher behavior.

The Language Arts Curriculum Guide (Alberta Education, 1978) identifies five language arts -- reading, writing, listening, speaking, and viewing -- which are seen as encorporating fourteen of the sixteen components of the matrix (excepting Study Skills and Miscellaneous) and thirteen of the additional categories of teacher behavior. Figure 5 provides a listing of the components and additional behaviors associated with each of the language arts.

FIGURE 5. Components (C) and Other Teacher Behaviors (B) Associated with Each of the Language Arts

Reading

Comprehension (C)
Literature (C)
Oral Reading (C)
Phonics (C)
Structural Analysis (C)
Word Meaning (C)
Comprehension: Prediction (B)
Listens: to Oral Reading (B)
Reads Aloud (B)
Silent Reading: Children (B)
Sustained Silent Reading (B)
Word Identification Practice (B)

Writing

Handwriting (E)
Spelling (E)
Usage (E)
Composing (E)
Composing: Consultation (B)
Composing: Shares (B)
Composing: Discusses (B)

FIGURE 5 (cont.)

Speaking	Listening	Viewing
Dramatics (C)	Listening (C)	Viewing (C)
Speaking (C)	Listens (B)	Views (B)
Discussion: Teacher Directed (B)		

This analysis provides data on how much of the teacher's time is focussed on each of the language arts. It does not, though, show how much time children actually spend on each strand. It is, however, possible to extrapolate how much time the teacher believes is scheduled for each strand during language arts classes by reviewing notes taken during classroom visits. This review shows that Non-instructional and General supervision activities often occur while students worked on assignments. By examining teacher activities which occurred immediately prior to the Non-instructional and General supervision, it becomes possible to get a rough estimate of time devoted to each strand.

Figure 6 provides a graphic depiction of how time scheduled for language arts was consumed, while Table 10 provides information by component and teacher behavior.

Not surprisingly, writing and reading were the two components to which the most time was allocated. Listening, speaking and viewing accounted for a much smaller portion of teacher time.

An analysis of selected elements of each of the language arts may prove more revealing. (Data on all categories is found in Appendix 1.)

FIGURE 6: Observed Time Allocated to Non-instructional, Transition, General Supervision and the Five Language Arts

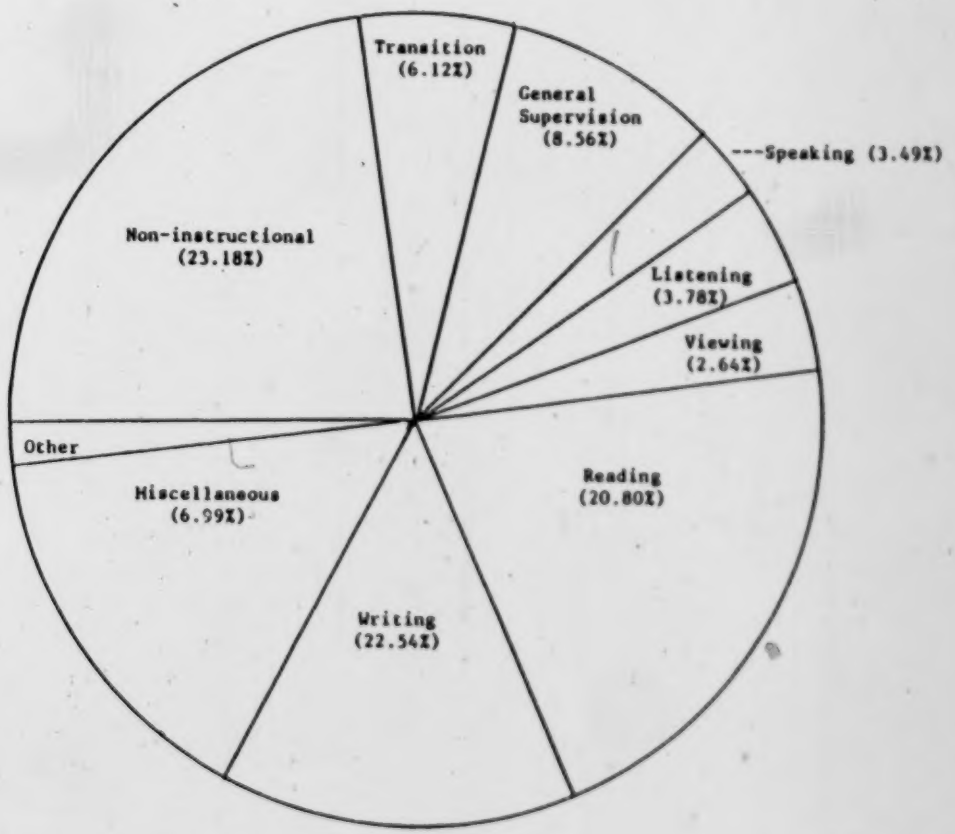


TABLE 10

Utilizaton of Teacher Time on Activities Associated with Each of the Language Arts

	Frequency of Observed Behavior (number of 30-second intervals)	Frequency of Observed Behavior (expressed as a percentage of total time)
Reading		
Comprehension (C)	487	13.53
Literature (C)	2	.33
Oral Reading (C)	Nil	-----
Phonics (C)	13.5	0.37
Structural Analysis (C)	29	0.80
Word Meaning (C)	36	1.00
Comprehension: Prediction (B)	9	.25
Listen: to Oral Reading (B)	8.5	.24
Reads Aloud (B)	40	1.11
Silent Reading: Children (B)	31.5	.87
Sustained Silent Reading (B)	83	2.30
Word Identification Practice (B)	Nil	-----
Total:	749.5	20.80
Writing		
Handwriting (C)	26	0.72
Spelling (C)	242	6.72
Usage (C)	201	5.58
Writing (C)	283	7.86
Writing: Consultation (B)	11	0.31
Writing: Shares (B)	14	0.39
Writing: Discusses (B)	34.5	0.96
Total:	811.5	22.54
Speaking		
Dramatics (C)	45.5	1.26
Speaking (C)	Nil	-----
Discussion: Teacher Directed (B)	80.5	2.23
Total:	126	3.49
Listening		
Listening (C)	62.5	1.73
Listens (B)	74	2.05
Total:	136.5	3.78
Viewing		
Viewing (C)	33	.92
Views (B)	62	1.72
Total:	95	2.64

82

Reading

Teacher behavior relating to comprehension consumed well over half of all time assigned to reading related behavior. Data related to the comprehension component is presented in Table 11. The table provides information about the number of days on which the teacher was observed (maximum: 15), the number of classrooms in which the behavior was observed (maximum: 5), the frequency of the observed behavior expressed as the number of 30-second intervals, and frequency expressed as a percentage of the total time. A guide to interpreting data in each cell is found in Figure 7.

Four categories of teacher behavior within the component Comprehension (assignment: checks, assignment: gives, assignment: helps with, and preparation) were among the twelve most frequently observed behaviors and have been discussed earlier in this chapter.

Comprehension: instruction was used to describe behavior observed once in each of two classrooms. One lesson focussed on reading newspaper stories, with the teacher explaining the meaning and purpose of different conventions such as date lines and news services. The information provided by the teacher had the potential of increasing the children's understanding of newspaper articles they might read.

In the other classroom, the teacher provided a lesson on the special techniques required when reading instructions and diagrams, which was followed by an activity which involved students following instructions to build kites.

Teacher behavior categorized as Comprehension: prediction was observed only once in each of two different classrooms, one for a total of three minutes and one for ninety seconds.

TABLE 11

Time Utilized for Teacher Behavior Relating to Comprehension

Application	Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction	Tests
	10	5	12	5	9	5	2	2	5	5		
	190.5	5.29%	76	5.29%	81	2.25%	35	.97%	95.5%	2.65%		

FIGURE 7. Guide to Interpreting Data Presented in Tables 11 to 15 and Appendix II

ASSIGNMENT: GIVES

Number of days on which behavior was observed (maximum: 15)

Number of classrooms in which behavior was observed (maximum: 5)

COMPREHENSION	10	5
	187.5	5.20%

Frequency of observed behavior (expressed as the number of 30-second intervals)

Frequency expressed as a percentage of total time

Note: For the purpose of illustration, the cell for the component "comprehension" and the teacher behavior "assignment: gives" has been reproduced.

The next largest reading related categories were Sustained silent reading, which as one of the most frequently observed behaviors was discussed earlier, and the teacher behavior categorized as Reads aloud, which was observed on four occasions in three classrooms. Twice the behavior involved the teacher reading from a reading textbook and was closely associated with a comprehension assignment. On the other two occasions, the teacher appeared to read daily to her grade six class from a novel.

The component word meaning accounted for one per cent of the time observed. As is shown in Table 12, no specific teacher behavior emerged related to this element.

Time spent on other reading components and behavior categories not included in the matrix was minimal.

Writing

Three components of the language art Writing were observed with some regularity. The component Composing, with three related behavior categories which were not part of the matrix, accounted for 9.52 per cent of all observed time. Use of time for Composing related activities is summarized in Table 13.

At first viewing the amount of time devoted to Composing appears encouraging. Examination of the nature of the activities in which students were involved makes it less so. Most Composing activities observed were straight from the teacher's guidebooks for the reading series used in the classrooms. The Composing assignments expected the student to be "creative", responding to artificial stimuli, rather

TABLE 12

Time Utilized for Teacher Behavior Relating to Word Meaning

Application		Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation	Review of Instruction	Tests
1	1	2	2	2	2	1	1	2	2			
9.5	.29%	3.5	.10%	1.5	.04%	9.5	.26%	17.5	.69%			

TABLE 13

Time Utilized for Teacher Behavior Relating to Composing

Application	Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction		Tests
	5	3	7	4	6	4	1	1	3	2	1	1	
	78.5	2.18%	36.5	1.01%	32.5	.90%	7	.19%	66	1.83%	3	.08%	

Comprehension: Prediction			Composing: Consults			Composing: Sharing			Composing: Discusses		
2	2		2	2		1	1		2	2	
9	.25%		11	.31%		14	.39%		34.5	.96%	

than encouraging writing based on the children's experiences. The following excerpt from a teacher's guidebook is neither better nor worse than other Composing assignments, only typical:

> Remind the students that they have just read about many purposes for kites. Ask them to think of and write about original and/or unusual uses to which kites might be put. Children may propose uses such as supporting an artificial moon on moonless nights, providing a way for wingless angels to ascent into the clouds, or holding up large umbrellas to shield people from the hot sun. Others might consider more scientific uses, such as supporting TV cameras for reconnaissance or acting as communication satellites.
>
> Encourage the children to support their written descriptions with diagrams and charts. Their infished proposals could be displayed in a section of the room reserved for "New Uses for Kites" (McInnes, 1977, p. 98).

This excerpt from a guidebook was read to students nearly verbatum.

Writing occurred with an ill-defined audience, which appeared to be most frequently "teacher as examiner" (Britton, 1975, p. 122), as is reflected by the frequency of observations of teacher behavior categorized as Composing -- assignment: checks. As one of the twelve most observed behaviors, this category was discussed earlier. Suffice to comment here that the emphasis was on the searching out of errors. Little emphasis appeared to be placed on crafting the product through consultation between child and teacher or other children. The opportunity to share what was written was virtually non-existent.

What Graves (1978b) referred to as the "preliminaries" of writing, with the possible exception of handwriting, were not ignored in the classrooms visited, as is illustrated in Tables 14 and 15.

In classrooms in which the spelling component was observed, the program was very much driven by a textbook, placing spelling in isolation from other aspects of writing. The routine for spelling was

TABLE 14

Time Utilized for Teacher Behavior Relating to Usage

Application		Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction		Tests	
	2	6	3	4	2	3	3	4	3			7	4		
16	.44%	36	1.00%	70	1.94%	14.5	.40%	30.5	.85%			34	.94%		

TABLE 15

Time Utilized for Teacher Behavior Relating to Spelling

Application		Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction		Tests	
1	1	6	3	6	3	5	4	2	2	1	1	3	2	3	2
1	.03%	79	2.19%	42.5	1.18%	42.5	1.18%	38	.22%	20	.56%	4.5	.12%	44.5	1.24%

dictated by the authors of the series, producing a general weekly routine of introducing words on Monday, doing the textbook exercises on Tuesday and Wednesday, correcting them on Thursday, and having a dictation test on Friday. Instruction was minimal.

The teacher's activities in usage focussed on "worksheets" which were presented in a variety of manners such as by overhead projector, on the blackboard, and on paper. Instruction was directed toward the proper use of convention of the language, such as quotation marks, periods and commas.

Speaking, Listening, and Viewing

Once the teachers had dealt with the traditional language arts, reading and writing, they appeared to have little time for the other three. The component speaking itself did not have one teacher behavior assigned to it. Teacher behavior related to Dramatics was observed briefly in two classrooms. The category Discussion: Teacher Directed was applied to four classrooms and, while it was among the most frequently used categories, and therefore was discussed earlier, it occupied a small part of the language arts time.

In three classrooms, some time was spent preparing children for listening activities by defining words which would be used or setting the scene, but no instruction was provided related to listening, such as how to listen more effectively. Surprisingly, considering the emphasis in other elements of language arts, on only one occasion was any teacher behavior placed in a category related to assignments.

Only once was a category related to viewing used.

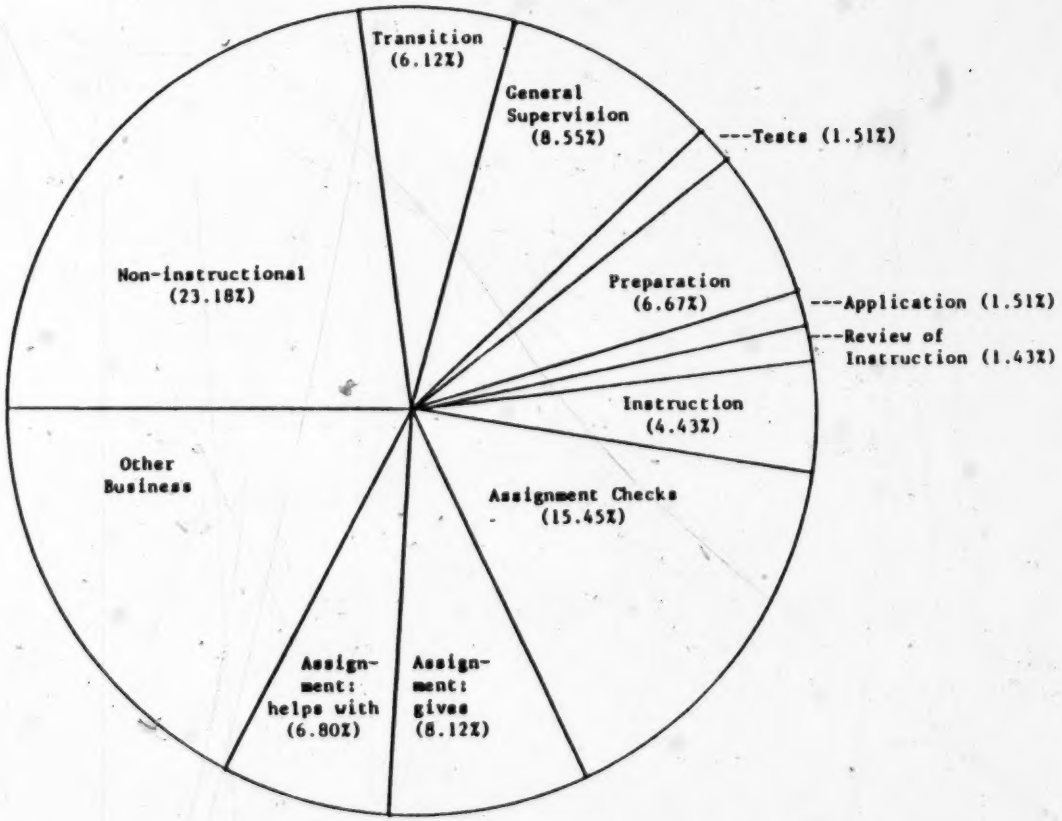
Teacher Behavior

In Chapter III eight generic categories of teacher behavior were developed and included in the matrix. The data which have already been viewed in terms of the components of the matrix may also be examined in terms of these eight categories of teacher behavior. This has been summarized in Figure 8.

Behavior related to assignments -- giving them, helping with them, and checking them -- consumed about one-half of the time left after teacher behaviors categorized as Non-instructional, General Supervision, and Transition. Literally in every classroom, on every day, children were exposed to teacher behavior related to assignments. Generally these assignments were from textbooks, workbooks or on work-sheets. They were seldom preceeded by any instruction related to the assignment and without an opportunity for guided practice before students were on their own. The emphasis was on giving directions on how to complete the assignment as quickly as possible, so that the children could "get to work".

At first, the fact that 4.43 per cent of the total time scheduled for language arts was utilized for behavior categorized as instruction seems low. Closer analysis demonstrates that it is even lower! Of the 4.43 per cent, 1.67 per cent was related to the component Miscellaneous, which meant it was unrelated to language arts. Miscellaneous: instruction included lessons on the meaning of various phrases of The Lord's Prayer (part of opening exercises), on latitude, longitude and time zones, and in mathematics. Less than one percent of observed time was spent on instruction related to Comprehension, with there being a sprinkling of instruction in several other components.

FIGURE 8: Observed Time Allocated to Non-instructional, Transition, General Supervision and the Eight Teaching Functions



Each classroom was visited for five hours or more during the three days of observations. In one classroom no teacher behavior which could be categorized as Instruction related to any of the sixteen components was seen. In another classroom, teacher behavior which could be described as Instruction was observed once in three days, and that for only two minutes. The greatest amount of time categorized as Instruction in any classroom visited was nearly forty minutes over the three days. This represented 11.39 percent of the time observed in that classroom. Ironically, this was the same teacher whose behavior was most frequently described as Non-instructional.

The behavior Review of Instruction, which accounted for 1.43 per cent of observed time, was most frequently associated with the element Usage. Teachers would spend time while children were writing or doing worksheets reminding them of previously taught grammar lessons.

The behavior Preparation (6.76%) was used to describe teacher action in readying children to read (Comprehension), write (Composing) or listen (Listening). Generally the intent was to motivate the children.

Application and Tests were two behaviors observed in only three classrooms each. Any behavior to which these categories could be applied was brief in nature. The category Tests was applied virtually exclusively in relationship to the element Spelling, which was the only curriculum area in which specific testing occurred. It should be noted that much of what was categorized as assignments was used more to test what the children knew or could understand from reading or listening, than a true opportunity to practice new skills. The distinction

between Tests and Assignments was felt to rest in the mind of the teachers for the purpose of categorization. If the teacher felt she was testing children, this behavior category Tests was used. If this was not the teacher's intention, no matter the appearance, one of the assignment categories was used.

Summary

The focus of this study was on the utilization of teacher time during that time scheduled for teaching language arts. Data collected in five classrooms over a three week period reveals that as much as forty percent of teacher time during language arts periods is spent on behaviors unrelated to this subject area. This behavior was categorized mainly as Non-instructional, General Supervision, and Transition.

Most of the remaining sixty percent of the time was devoted to teacher behavior related to Assignments -- giving them, helping with them, and checking them. The key component of classroom life for both teachers and children appeared to be worksheets and workbooks. They were used in every classroom, every day.

Little time (less than 5%) was devoted to behavior described as Instruction, and much of that which was related to the component Miscellaneous. Instruction was virtually non-existent in two classrooms.

Behavior described as Preparation was observed less than seven per cent of the time observed and consisted primarily of motivational activities. Behavior categorized as Application, Review of Instruction and Tests, when combined, accounted for less than five per cent of the observed time.

In Chapter V these results will be discussed, implications for practice identified and suggestions for further researcher made.

CHAPTER V

DISCUSSION

At the time, and even when we look back at our school days, it would seem that a great deal of our childhood is spent in class. John Goodlad (1984) suggests that "Perhaps because school occupied such a large part of the daylight hours during childhood and adolescence it looms large in our memories of growing up (p. 95)." In fact, as Goodlad demonstrates, school time is a very small portion of a child's life to graduation at age eighteen.

> Assuming a year of public or private kindergarten (about 18% of five-year-olds are not enrolled) and six hours of elementary schooling for 180 days of six successive years, a twelve-year-old will have spent about 7,020 hours in school, and this is only about 6.5% of total hours lived. By the age of fifteen, these figures are 10,260 hours in school and about 7.7% of hours lived. By the age of eighteen and graduation from high school, the percentage has climbed to only 8.5%. Most of this time is spent in classrooms. Using data on watching television, I estimate that, for the average American child, the hours spent before a television set from birth to age eighteen range between 9% and 10% of total hours lived (p. 96).

The calculation would apply in Alberta as well as in American schools.

In reality therefore, there is very little time for teachers to fulfill the multitude of tasks assigned to schools, not the least of which is teaching children to "read and write" (and view, speak and listen). In light of this, the findings noted earlier should be some cause for concern. That four of every ten minutes scheduled for teaching language arts is consumed by teacher behavior classed as Non-instructional, General Supervision, and Transition is unacceptable.

This is not to say, however, that all time scheduled for teaching language arts should be consumed by behavior described as Instruction. Such a viewpoint is both unrealistic and undesirable. Teachers must allow children time to discuss and practice what they have learned, testing is often desirable, and time should be provided for children to read, write and be read to. As well, for a class to run smoothly, and to be a place where children want to be, time will necessarily be devoted to administrative and social activities.

This study does suffer from a number of limitations. The sample, five teachers, is small. The number of categories for teacher behavior proved cumbersome and should be reduced if such research was repeated. It has been four years since the data was collected; teachers may have become more effective in how they utilize teaching time. Despite efforts to define terms and determine inter-rater reliability before the study began, the categorization of the data collected may be subjective.

Nevertheless, this study does support the findings of other researchers (Quirk, Trismen, Weinberg and Nolin, 1978; Durkin, 1978-1979; Hillerich, 1982; Mason, 1983; and others): a large portion of time available for teaching language arts is "wasted" by teachers.

Predictable Outcomes

There were really no surpirses in the findings. From the research of Durkin (1978-1979) and others discussed in Chapter II, one was bound to predict certain outcomes:

- much of the time scheduled for teaching language arts would be consumed by teacher behavior which was unrelated to what the children were, and should be, doing (Non-instructional), which consisted of policing children as they worked (General Supervision), or which involved waiting for children to get ready (Transition).

  This study found that nearly 40 per cent of the time scheduled for teaching language arts was devoted to activities labelled Non-instructional, General Supervision, or Transition.

- much of the remianing time would be consumed by activities related to assignments, and that these assignments would be primarily workbook and worksheet exercises.

  This study found that less than five per cent of the observed teacher time was used for activities which fit the definition of Instruction used in this and Durkin's study.

- a great deal of time would be devoted to reading and writing, and little to speaking, listening, and viewing.

  This study found that teacher behavior related to reading and writing accounted for over 40 per cent of the total observed time or two-thirds of the time not consumed by Non-instructional, General Supervision, and Transition. The time during which teacher behavior related to the other three language arts was roughly equivalent to the time associated with teacher behavior Miscellaneous which relates to subject areas other than language arts.

Some Thoughts About the Results

Several thoughts come to mind when reviewing these findings. The presence of a researcher in itself has long been recognized as effecting the behavior of the subjects of the research (Williamson, Karp and Dalphin, 1977, pp. 237-238). In this study teachers, who were identified by their principals as "good teachers of language arts," may have been on their "best behavior." If what was seen was an example of good teachers demonstrating their best teaching, there is reason for concern. How was time used on typical days when no researcher was present? How is time used by less than good teachers?

In its recommendation related to the use of time, the National Commission on Excellence in Education (1983) states "We require more effective use of the existing school day, a longer day, or a lengthened school year" (p. 29). The Commission report is seen as having put education back in the American (and, by proximity, Canadian) agenda. At the top of the agenda, must be the effective use of time.

With this and other studies demonstrating that much classroom time is poorly utilized, any consideration of lengthening the school day or adding to the school year should be shelved until there is a full examination of how existing time is being used and how it can be used more effectively.

The pattern which emerged from the five classrooms visited is that the greater amount of time available for teaching language arts, the greater the portion of time devoted to behaviors described as Non-instructional, General Supervision and Transition. More time can not be equated to more instruction or learning; not until time available to classroom teachers can be used more effectively.

The small amount of time devoted to behavior which could be described s Instruction, and its total absence in some classrooms, is particularly troublesome. All the models of teaching discussed in Chapter II agreed on the need for input by the teacher (Instruction) and guided practice (Application) as the essential elements of a lesson. But, evidence points to a leap by the teacher from "Good morning class" to "Here's your assignments." Instruction is pushed aside in the rush to get children "to work."

Classroom practices described as "mentioning" (Durkin, 1981) and "activity-ing it" (Minton, 1979) displaced Instruction in the classrooms visited. Described in more prosaic terms in this study as Assignment: gives, this behavior accounted for 8.12 per cent of the observed time, nearly double that assigned to Instruction. At times, it was as if the classroom were a widget factory; the teacher an assembly line worker paid on a piece work basis. Worksheets became the widgets of education.

Once assigned, these exercises might afford some opportunity for learning, if used in the fashion by teachers. However, the emphasis during the time (15.45%) Assignment: checks behavior was observed was on determining whether questions were right or wrong, not why they were right or wrong.

Earlier in this chapter, one of the limitations identified was the long time between data collection and preparation of this report. It was suggested, perhaps facetiously, that "teachers may have become more effective in how they utilize teaching time." In fact, two things have happened since 1980 which may have had some impact.

Firstly, Alberta Education has introduced achievement examinations in core subjects at grades 3, 6 and 9, which increasingly have become a basis for comparison of teachers, schools and school systems. The result may be a greater focus on the curriculum on which these tests are based and a greater effort to cover the curriculum. This may mean more time devoted to instruction. Or more time spent on behavior related to assignments.

Secondly, great emphasis has been placed on teacher supervision in the early part of this decade. Principals, and others charged with this responsibility, have spent time in classrooms examining how teachers teach. Part of this examination may have centered on the use of time, or the presence of teacher input and guided practice. Perhaps supervisors may have helped teachers improve in these areas.

While recognizing that events since this data was collected may have changed how teachers utilize time, it must be noted that no evidence has been lcoated in the literature which supports this point of view. As well, casual classroom observations in recent years do not support this view.

Proceeding on the assumption that the utilization of time by language arts teachers remains unchanged, a number of implications for practice leading to improved use of time will be identified.

Implications for Practice

Time in schools can be used more effectively. If even a few minutes per class period can be reclaimed from that presently consumed by Non-instructional behavior, and utilized for Instruction, the potential for student learning is enhanced.

The means by which this can occur seems obvious. Class can begin on time. Time when students are completing assignments can be used to provide individual instruction as required. Assignments can be used more as a teaching tool and less as a testing tool.

In addition to the teacher, a key to improving the effectiveness of teachers in utilizing the time scheduled for teaching language arts rests with school principals, who can take several actions which should result in the more effective use of time. The first of the actions is in the area of Non-instructional time. Any reduction in Non-instructional time increases the amount of time potentially available for Instruction or other behaviors more closely associated with the curriculum.

In Chapter IV, three subcategories of Non-instructional are identified: integral, external, and internal. Of the three, Non-instructional: external should be the first to receive attention by the principal. Non-instructional: external time has sources beyond the teacher and classroom, largely sources over which the teacher has no control. These sources are often controlled by the principal, and therefore under his control to remedy.

School-wide opening exercises can be reduced, or the school day lengthened to accommodate them. Use of the P.A. system should be limited and, when used, messages should be directed only to those classrooms for which they have relevancy. Alternatives to the teacher should be found for the collection of money related to school photographs, lunch, or fieldtrips.

The principal can also contribute to a reduction of Non-instructional time which was described in Chapter IV as internal. School policies can require teachers to be in the classroom as children arrive and be prepared to begin when teaching is scheduled to begin. As well, teachers could be required to stay in their classrooms during time scheduled for teaching, thus reducing time loss due to phone calls or visits with neighbouring teachers.

In addition to, or instead of, the somewhat negative approach of rule making, the principal could help teachers to examine their use of time. This might be done through workshops based on work of writers such as Wyne and Stuck (1982) who suggest that teachers can improve their use of time by adhering to scheduled times for teaching, reducing transition time, minimizing time wasters, and monitoring students as they work.

The use of time should also be a focus for classroom visits by principals related to teacher supervision. Through observation, the principal can identify examples of Non-instructional, General Supervision and Transition behaviors, and help the teacher reduce the amount expended in these areas.

Reducing the amount lost due to Non-instructional behavior by itself will not improve the opportunities for student learning. In the classroom, the principal must focus on how all the time is used. The principal should work from a teaching model such as those identified in Chapter II, all of which identified the need for teacher input (Instruction) and guided practice (Application) as necessary components of an instructional lesson. The principal should ensure that both

components of the lesson are present, and in sufficient quantities, to create a high potential for learning. One way to help teachers plan to include Instruction in their classes is by identifying the desired learning through behavioral objectives (Minton, 1979).

A significant feature of all classrooms visited was workbooks and worksheets. Why they are in such abundance is a matter for some debate. Publishers say they are there because teachers demand them (Graves, 1977). Others (Mason, 1983) suggest that they are used because principals, who buy them, require their use by teachers. No matter the reason, their use must be examined by principals and teachers. Research (Durkin, 1978-1979; Durkin, 1981; Mason, 1983) suggests that their presence reduces the amount of Instruction which occurs.

Suggestions for Future Research

Like most research, this study generates more questions than it answers -- which provides ample opportunities for further research.

Reference was made earlier in the chapter to the potential impact of achievement tests and increased teacher supervision. Both, or either, may have changed how teachers utilize their time, suggesting that a similar study should be conducted to determine if the results would be different today than four years ago. Where there is a change, tracing its source might prove difficult, and would, at best, require a number of interviews with persons in the schools who might shed light on what has happened during the past four years which might have influenced teachers in their use of time.

Another study might focus on the effect of intervention on the use of time by teachers. The process would involve the collection and analysis of data. It would then be discussed with the subjects and suggestions made to them based on the findings. Subsequently, new data would be collected in the same classrooms and compared to the original data. If time permitted, a longitudinal study could examine achievement test results in classrooms taught by these teachers, both prior to and following the intervention. The results might become part of the answer to the question: "Does the teacher make a difference?"

Achievement test results might provide a standard basis for selecting "good teachers" for a similar study. Perhaps a relationship would be found between achievement by students and utilization of tiem by teachers.

In Chapter IV it was noted that the teachers who had the least amount of time scheduled for teaching language arts, spent less of this time on Non-instructional behavior. Does this reflect teacher inefficiency? Whta can we learn about classroom management from the more efficient teachers? How does the amount of time scheduled for teaching language arts and/or teacher inefficiency effect standardized test results?

BIBLIOGRAPHY

Alberta Education, Curriculum Guide for Elementary Language Arts. Edmonton: Queen's Printer, 1978.

Alberta Education, Elementary Program of Studies. Edmonton: Queen's Printer, 1982.

Alberta Education, Junior-Senior High School Handbook, 1984-1985. Edmonton: Queen's Printer, 1984.

Block, Alan W., Effective Schools: A Summary of Research. Arlington, Virginia: Education Research Service Inc., 1983.

Britton, James, Tony Burgess, Nancy Martin, Alex McLeod, and Harold Rosen, The Development of Writing Abilities 11-18. Urbana, Illinois: National Council of Teachers of English, 1975.

Crowther, Frank, An Analysis of Some Effects of the 1981 Revision to the Program of Studies for Elementary Schools. A papre prepared for the Curriculum Policies Committee, March 6, 1983.

Cutts, Warren G., "Does the Teacher Really Matter?" The Reading Teacher, 28:5, (February, 1975), 449-452.

Durkin, Delores, Teaching young Children to Read, 2nd edition. Toronto: Allyn and Bacon, Inc., 1976.

Durkin, Delores, "What Classroom Observations Reveal about Reading Comprehension Instruction." Reading Research Quarterly, 14:4, (1978-1979), 481-533.

Durkin, Delores, "Schools Don't Teach Comprehension." Educational Leadership, 38:6 (March, 1981), 453-454.

Eaton, Janet Flegg, "What Do Students Learn from Seatwork?" Educational Leadership, 39:5 (February, 1982), 395-396.

Eaton, Janet, "How Teachers Spend Language Arts Time." Educational Leadership, 39:8 (May, 1982), 628-629.

Eisner, Elliot W., "The Impoverished Mind." Educational Leadership, 35:3 (March, 1978), 615-623.

Fisher, Charles W., David C. Berliner, Nikola N. Filby, Richard Marliave, Leonard S. Cohen, and Marilyn M. Dishaw, "Teaching Behaviors, Academic Learning Time and Student Achievement: An Overview." Journal of Classroom Interaction, 17:1 (Winter, 1981), 2-15.

George, Paul S., What is an Effective Teacher -- Really? Gainsville, Florida: Teacher Education Resources, 1982.

Goodlad, John I., "What Goes on in Our Schools?" Education Researcher, 6:3 (March, 1977), 3-6.

Goodlad, John I., A Place Called School: Prospects for the Future. Toronto: McGraw Hill, 1984.

Government of the Province of Alberta, School Act. Edmonton: Queen's Printer, 1980.

Graves, Donald H., "Language Arts Textbooks: A Writing Process Evaluation." Language Arts, 54:1 (October, 1977), 817-823.

Graves, Donald H., "Handwriting is for Writing." Language Arts, 55:3 (March, 1978), 393-399.

Graves, Donald H., "We Won't Let Them Write." Language Arts, 55:5 (May, 1978), 635-640.

Guthrie, John T., "Time in Reading Programs." The Reading Teacher, 33:4 (January, 1980), 500-502.

Harste, Jerome C., "Understanding the Hypothesis, It's the Teacher that Makes the Difference, Part I." Reading Horizons, 18:1 (Fall, 1978), 32-41.

Hillerich, Robert L., "That's Teaching Spelling???" Educational Leadership, 39:8 (may, 1982), 615-617.

Hunter, Madeline, Rx: Improved Instruction. El Segundo, California: Tip Publications, 1976.

Hunter, Madeline, A Presentation to the Western Canada Educational Administrators' Conference. Edmonton: October 20, 1979.

Justiz, Manuel J., "It's Time to Make Every Minute Count." Phi Delta Kappan, 65:7 (March, 1984), 483-485.

Karweit, Nancy L., Time-on-Task: A Research Review. Baltimore: Center for Social Organization of Schools, The John Hopkins University, 1983.

Karweit, Nancy, "Time-on-Task Reconsidered: Synthesis of Research on Time and Learning." Educational Leadership, 41:8 (May, 1984), 32-35.

Levin, Tamar, with Ruth Long, Effective Instruction. Alexandria, Virginia: Association for Supervision and Curriculum Development, 1981.

Mason, Jana M., "An Examination of Reading Instruction in Third and Fourth Grades." The Reading Teacher, 36:9 (May, 1983), 906-913.

McInnes, John and others (eds.), Teacher's Resource Book for Kites and Cartwheels. Don Mills: Nelson, 1977.

Minton, Erlene, Clinical Supervision: Developing Evaluation Skills for Dynamic Leasdership (K-12). Englewood, Colorado: Educational Consulting Associates Inc., 1979.

The National Commission on Excellence in Education, A Nation at Risk: The Imperative for Educational Reform. Washington, D.C.: United States Department of Education, 1983.

Ornstein, Allan C., "A Look at Research: How Good are Teachers in Effecting Student Outcomes. NASSP Bulletin, 66:458 (December, 1982), 61-70.

Patching, William, Edward Kameenui, Douglas Carnine, Russel Gersten, and Geoff Colvin, "Direct Instruction in Critical Reading Skills." Reading Research Quarterly, 13:4 (Summer, 1983), 406-418.

Quirk, Thomas J., Donald A. Trismen, Susan F. Weinberg, and Kathleen B. Nolin, "Attending Behavior During Reading Instruction." The Reading Teacher, 29:7 (April, 1976), 640-646.

Rankin, Paul T., "The Importance of Listening Ability." The English Journal, 17:8 (October, 1928), 623-630.

Reid, Ethna R., "Comprehension Skills Can Be Taught." Educational Leadership, 38:6 (March, 1981), 455-457.

Renihan, F.I., and P.J. Renihan, Effective Schools, Effective Administration and Institutional Image. A paper presented at the 15th Annual Western Canada Educational Administrators' Conference, Edmonton, October 21, 1983.

Rupley, William H., and Timothy R. Blair, "The Effective Reading Teacher: What are the Missing Pieces?" Reading Horizons, 17:4 (Summer, 1977), 239-242.

Sadoski, Mark C., "Ten Years of Uninterrupted Sustained Silent Reading." Reading Improvement, 17:2 (Summer, 1980), 153-156.

Saunders, James T., "Teacher Effectiveness: Accepting the Null Hypothesis." The Journal of Educational Thought, 12:3 (December, 1978), 184-189.

Schmidt, William H., and Margaret Buchmann, "Six Teachers' Beliefs and Attitudes and Their Curricular Time Allocations." The Elementary School Journal, 84:2 (November, 1983), 162-171.

Searle, Dennis, "Leaning to Write by Writing." Elements, 10:3 (November, 1978).

Shanahan, Timothy, "The Writing Crisis: A Survey and a Solution." Phi Delta Kappan, 61:3 (November, 1979), 216-217.

Simpkins, W.S., and D. Friesen, "Discretionary Powers of Classroom Teachers." The Canadian Administrator, 9:8 (May, 1970), 35-38.

Squires, David A., William G. Huitt, and John K. Segars, Effective Schools and Classrooms: A Research-Based Perspective. Alexandria, Virginia: Association for Supervision and Curriculum Development, 1983.

Starr, Kathleen, and Bertram C. Bruce, "Reading Comprheension: More Emphasis Needed." ASCD Curriculum Update, (March, 1983), 1-6.

Symyrozum, L.E., A Summary of Scheduled Instruction Times for Prescribed Schools, 1978-1979. Edmonton: Alberta Education, 1979.

Trafton, Paul R., "Toward More Effective, Efficient Instruction in Mathematics." The Elementary School Journal, 84:5 (May, 1984), 514-528.

Williamson, John B., David A. Karp, and John R. Dalphin, The Research Craft: A Introduction to Social Science Methods. Toronto: Little, Brown and Company, 1977.

Wyne, Marvin D., and Gary B. Stuck, "Time and Learning for the Classroom Teacher." The Elementary School Journal, 83:1 (September, 1982), 67-75.

Young, Timothy, "Teacher Time on Task: A Significant Variable." Phi Delta Kappan, 61:2 (September, 1980), 60.

APPENDIX I

Categories of Teacher Behavior for Durkin's Study Not Included in Matrix of Teacher Behavior in Language Arts

(Source: Durkin, 1978-1979, pp. 528-530)

Collects materials -- This category should be used when a teacher collects something -- for instance, art supplies or completed assignment sheets.

Demonstrates -- Teacher shows something, for instance, a special book, a diagram, or how to manipulate something. (If a child shows and discusses something, the teacher's behavior is "Listens.")

Diagnosis: checks information -- If teacher checks written information pertaining to diagnosis of instructional needs, use this category.

Diagnosis: uses -- Use this category if the teacher wirtes something that pertains to an instructional need.

Discussion: teacher directed -- Whenever this category is used, specify what is being discussed. (If the discussion is an effort to find out whether children comprehended something they read, use "Comprehension: assessment." If the discussion is clearly non-instructional (eg., deals with lost property, revised bus schedule), describe the teacher's behavior as "Non-instruction." If the discussion has instructional potential but the teacher is listening rather than directing the discussion, list her/his beha2vior as "Listens.")

Distributes materials -- If a teacher takes time to give materials to individuals (for example, for an assignment), the activity goes here.

Listens -- If a teacher is listening to something other than oral reading, the activity is assigned to this category. (If she/he is listening to children's answers to assess their correctness, the activity is "Assignment: checks" or "Comprehension: assessment.") Listening to a move or to a record is "Listens."

Listens: to oral reading -- If a teacher spends time listening to individuals or a group read aloud, the activity goes under this category. (If she/he is having the children read aloud in order to check on responses, the activity goes under "Assignment: checks" or under "Comprehension: assessment.") Reserve the above category for the round-robin type of reading, or for something like listening to a child read a definition from a dictionary.

Map making -- If a teacher does something like sketch a coastline or draw the shape of a sea, use this category.

Map reading -- This category is for teacher-directed activities related to maps that do not involve reading any text. (If reading is involved, the activity ought to be classified differently.)

Non-instruction -- This heading is to be used whenever a teacher spends time doing something that is not instructing anybody in reading -- for instance: checks papers at desk, chastises child, records grades, waits while children do assignments, participates in non-instructional discussion with one or more children.

Reads aloud -- If the teacher reads aloud to one or more children, use this category.

Review: oral -- If a teacher directs an oral review of what was done or studied earlier (eg., in a previous social studies chapter), put the behavior here.

Silent reading: children -- The individual or graoup with whom the teacher is working is reading silently, and the teacher waits. (If she/he does something while they read, what she/he does should be classified under another heading.)

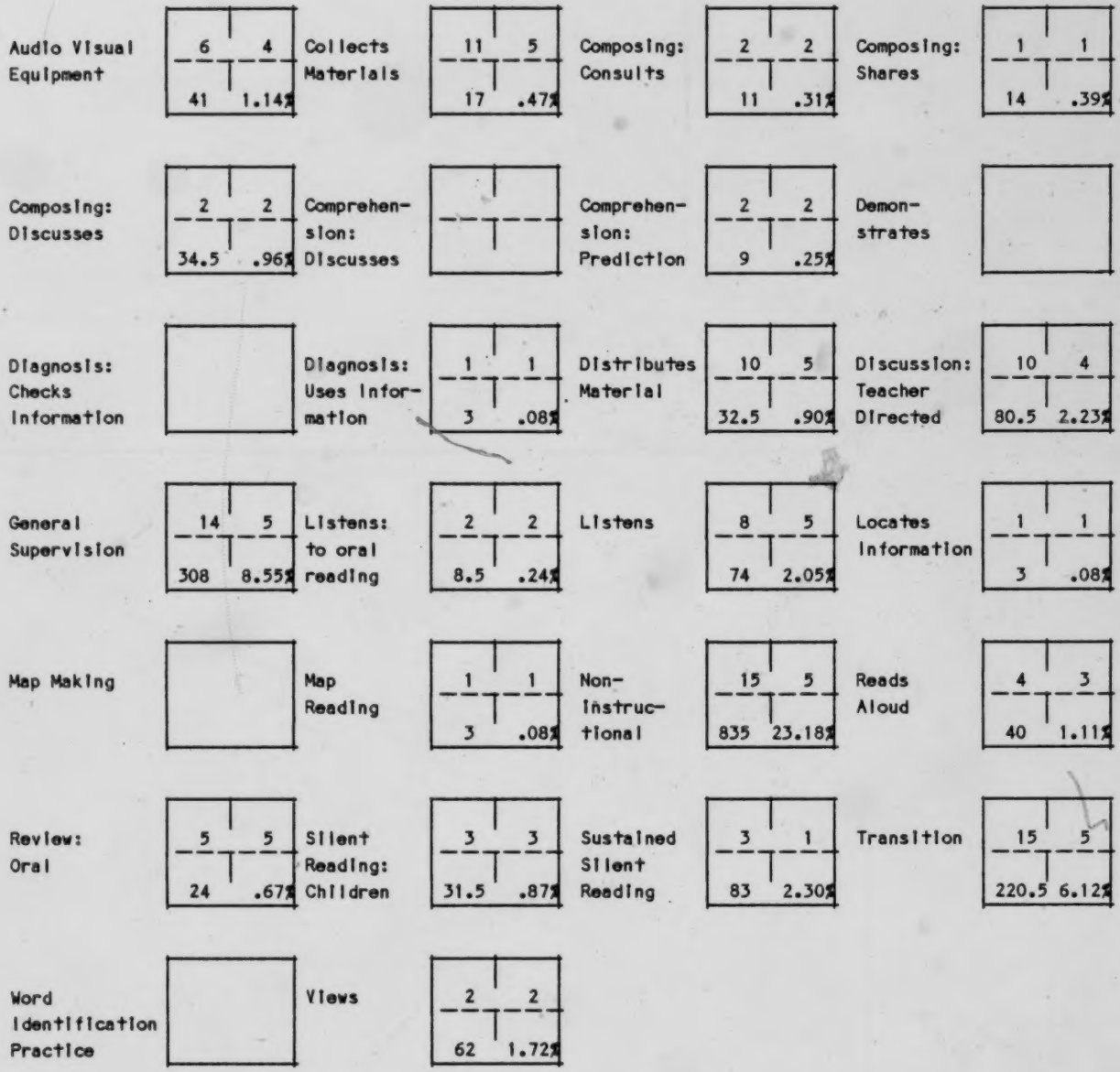
APPENDIX II

Summary of Observations by Categories of Teacher Behavior

(See Fig. 9 for a guide to interpreting data in this summary.)

Component \ Teaching Function	Application	Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction		Tests	
Composing		5	3	7	4	6	4	1	1	3	2	1	1		
		78.5	2.18%	36.5	1.01%	32.5	.90%	7	.19%	66	1.38%	3	.08%		
Comprehension		10	5	12	5	9	5	2	2	5	5				
		79	2.19%	42.5	1.18%	42.5	1.18%	38	.22%	20	.56%				
Dramatics		2	2	1	1					1	1				
		34.5	.96%	6	.17%					5	.14%				
Handwriting		2	1	1	1			1	1					1	1
		23.5	.65%	.5	.01%			.5	.01%					1.5	.04%
Listening		1	1							4	3				
		10.5	.29%							52	1.44%				
Literature		1	1	1	1										
		11	.31%	1	.03%										
Oral Reading															

Component \ Teaching Function	Application		Assignment: checks		Assignment: gives		Assignment: helps with		Instruction		Preparation		Review of Instruction		Tests	
Phonics	2	2	1	1	1	1							1	1		
	7	.19%	45	.12%	1	.03%							1	.03%		
Speaking																
Spelling	1	1	6	3	6	3	5	4	2	2	1	1	3	2	3	2
	1	.03%	79	2.19%	42.5	1.18%	42.5	1.18%	8	.22%	20	.56%	4.5	.12%	44.5	1.24%
Structural Analysis			2	2	2	2	1	1	1	1			1	1		
			14	.39%	8	.22%	3	.08%	1	.03%			3	.08%		
Study Skills					1	1	1	1								
					4	.11%	10	.28%								
Usage	3	2	6	3	4	2	3	3	4	3			7	4		
	16	.44%	36	1.00%	70	1.94%	14.5	.40%	30.5	.85%			34	.94%		
Viewing			1	1							1	1				
			28	.78%							5	.14%				
Word Meaning	1	1	2	2	2	2	1	1	2	2						
	9.5	.26%	3.5	.10%	4	.11%	1.5	.04%	17.5	.49%						
Miscellaneous	2	1	6	4	6	3	7	4	4	2			2	2		
	21	.58%	53	1.47%	43	1.19%	60	1.67%	60	1.67%			6	.17%	8.5	.24%


Audio Visual Equipment
6 4
41 1.14%
Collects Materials
11 5
17 .47%
Composing: Consults
2 2
11 .31%
Composing: Shares
1 1
14 .39%
Composing: Discusses
2 2
34.5 .96%
Comprehension: Discusses
Comprehension: Prediction
2 2
9 .25%
Demonstrates
Diagnosis: Checks Information
Diagnosis: Uses Information
1 1
3 .08%
Distributes Material
10 5
32.5 .90%
Discussion: Teacher Directed
10 4
80.5 2.23%
General Supervision
14 5
308 8.55%
Listens: to oral reading
2 2
8.5 .24%
Listens
8 5
74 2.05%
Locates Information
1 1
3 .08%
Map Making
Map Reading
1 1
3 .08%
Non-instructional
15 5
835 23.18%
Reads Aloud
4 3
40 1.11%
Review: Oral
5 5
24 .67%
Silent Reading: Children
3 3
31.5 .87%
Sustained Silent Reading
3 1
83 2.30%
Transition
15 5
220.5 6.12%
Word Identification Practice
Views
2 2
62 1.72%